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ABSTRACT

This final report on continuing education for health science library personnel is a summary of documents IR 504 545--IR 504 548. Questionnaires used in the study and descriptions of courses offered in continuing education programs are appended. (AP)

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FINAL REPORT

to the

National Library of Medicine

by

Julie A. Virgo, Ph.D.

Patricia McConaghey Dunkel

Pauline V. Angione

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Medical Library Association, Chicago, IL

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* 1. Berk, Robert. Continuing Education Needs of Health Sciences Librarians as Reflected by Changes in the Published Literature. 1975. Working Paper No. 4 prepared under Grant 5-R01 LM 01857-02. 126 p.

2. McConaghey, P. L., Virgo, J. A., and Angione, P. V. Continuing Education Needs of Health Sciences Library Personnel. Paper presented at the Medical Library Association Annual Meeting, San Antonio, Texas, 1974. 8 p.

3. Mickey, Melissa. Developing a Plan for Affirmative Action--Human Rights Bibliography. Chicago, Medical Library Association, 1973. Working Paper No. 3 prepared under Grant 5-R01 LM 01857-02. 54 p.

4. Mickey, Melissa. Problems and Programs in Continuing Professional Education. Chicago, Medical Library Association, 1974. Working Paper No. 1 prepared under Grant 5-R01 LM 01857-02. 91 p.

5. Virgo, J. A. Planning and Teaching Continuing Education Courses. Paper presented at the American Society for Information Science Annual Meeting, Boston, 1975, and published in ASIS SIG/ED Newsletter, No. ED-76-1, pp. 3-6.

6. Virgo, J. A. and Angione, P. V. Assessing Continuing Education Needs. Paper presented at the Medical Library Association Annual Meeting, Minneapolis, Minnesota, 1976. 28 p.

** 7. Virgo, J. A., Dunkel, P. M., and Angione, P. V. Continuing Education for Health Sciences Library Personnel. Final Report, Grant 5-R01 LM 01857-02 from the National Library of Medicine. Chicago, Medical Library Association, 1976. 237 p.

*** 3. Washtien, Joe. A Guide for Planning and Teaching Continuing Education Courses. Chicago, Medical Library Association, 1975. Working Paper No. 2 prepared under Grant 5-R01 LM 01857-02. 61 p.

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PROJECT PERSONNEL

Pauline V. Argione, Research Associate (20%)

Pamela Fertel, Secretary (50%)

Melissa Mickey, Research Associate (80%)*

Patricia McConaghey Dunkel, Research Associate (60%)**

Julie A. Virgo, Ph.D., Principal Investigator (70%)

* Resigned January 8, 1974

** Commenced February 19, 1974

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CHAPTER I

INTRODUCTION

Professional education, if it is successful, does not mark the termination of the educational process; indeed it signifies the beginning of a life of continuous learning and renewal. This axiom holds true for medical librarianship as well as for the other professions. In fact, if the need for continuing education can be inferred from the growth of knowledge in a particular field, the need in medical librarianship approaches the need in the biomedical sciences because medical librarianship functions to supply the bibliographic apparatus that organizes and disseminates the growing biomedical knowledge.

In the past, continuous learning was considered the responsibility of the individual professional but because of the rapid growth of biomedical knowledge and the vast implications of such growth for the practicing medical librarian it is increasingly apparent that continuing professional education is a responsibility that must be shared by the individual, by the profession, and by society.

Since 1958 the Medical Library Association (MLA) has offered formal continuing education courses in conjunction with both its annual and regional meetings. The topics for these courses were chosen as being responsive to the most pressing needs of medical librarians as perceived by the MLA Continuing Education Committee.

Over the years additional courses were developed and some existing offerings dropped. The program attempted to provide current, relevant information although the quality and variety of experiences were still considered deficient by members within the Association. The courses were aimed primarily at the professional, but also acknowledged that many operating "librarians" who registered for the courses had in actuality no previous library education. The result was that the same course would be offered to people with widely different backgrounds, truly satisfying the needs of few of the participants.

The appointment by the Medical Library Association of a Director of Education made it timely to consider the total needs of continuing education for medical librarianship rather than continuing to sprout programs in a vacuum, without an overall plan. It was hoped that such a plan could utilize data already existing, and extend that data where necessary. The following sources of data were planned to be used:

(1) "An Investigation of the Education Needs of Health Sciences Library Manpower" (1, 2, 3, 4, 5). This study was limited to non-hospital medical librarians. The kinds of data collected were demographic, education background (including participation in continuing education programs in library science), and employment characteristics. Data were also collected on felt needs for continuing education in librarianship.

(2) American Hospital Association Study (5). Data from this study parallels the data described in study 1 above, but was collected for hospital libraries and library personnel.

(3) "Directory of Health Sciences Libraries in the United States, 1969" (6). This study, funded by the National Library of Medicine, was undertaken by the Committee on Surveys and Statistics of the Medical Library Association under the auspices of the MLA and the American Medical Association (AMA). The data collected form part of the data used in (1) and (2) above.

(4) The Medical Library Association has information about those people who have taken their courses in the past. In addition, the MLA courses have been evaluated by the participants and this information is also on file. These data indicate the attributes and distribution of the people motivated to take the courses, and what they felt were the strengths and weaknesses of the courses.

The data gathered in studies (1), (2), and (3) above are in machine readable form; thus it was initially expected that further analysis and manipulation could readily be carried out.

Purposes of this Study

The purposes of this study are to assess the needs for continuing education for medical librarianship and to design, implement and evaluate some components of a program which will be responsive to those needs. The rationale underlying this investigation is that the MLA or other concerned organizations cannot make rational planning decisions regarding their responsibility to assist medical library personnel in continuing education without having first identified the educational needs of those individuals they are attempting to assist, and determining the forces which act for and against their participation in continuing education activities.

In order to accomplish these purposes, the specific objectives of this research are:

1. To identify the needs for continuing education in medical librarianship.
2. To establish to what extent these needs are presently being met by existing programs.
3. To gain insight into the forces acting for and against the development of, and participation in, continuing education programs.
4. To develop a plan for continuing education at several levels of medical librarianship, giving consideration to the best forms of continuing education within differing environments.
5. To design, administer and evaluate some sub-set of the components of the total plan.

Some Working Definitions

For the purpose of this report, "continuing education" is the process by which medical library personnel (alone, in groups, or in institutional settings) purposefully seek to improve themselves or their profession by changing their knowledge, attitudes, or skills; or it is any process by which individuals, groups or institutions try to help medical library personnel change in these ways.

"Educational need" is taken to mean a discrepancy between the present level of competency of medical library personnel and a higher level required for effective performance as perceived by the individual medical library worker.

"Medical librarian" is used in a generic sense and includes all personnel doing professional work in all types of medical libraries. It is used interchangeably with "health sciences librarian."

Methods of Procedure

At the time this investigation was undertaken the following procedures were planned:

1. Identify the needs for continuing education in medical librarianship.

   This phase was to have been executed in the following manner:

   a. Review the literature on continuing education, not only in librarianship but for other professions faced with similar problems.

b. Analyze the files and data collected by the Committee on Continuing Education of the Meducal Library Association to make the fullest use of experience gained by the Association in its continuing education activities.

c. Examine the data from the American Hospital Association Study (5) and the Rees et al. study (1, 2, 3, 4, 5) in greater detail in order to:

(a) identify stated needs for continuing education.

(b) specify the educational backgrounds and experience of the respondents.

(c) identify the tasks they perform.

d. Ascertain the need for additional data to answer questions that have not been dealt with by the above sources.

2. Establish to what extent the needs defined in step one above are presently being met by existing programs. Information responsive to this phase of the study was gathered as described below:

a. Survey library schools to gather information on any continuing education courses or institutes that they offer.

b. Gather information on the programs being offered by the Regional Medical Libraries.

c. Obtain information regarding the library continuing education activities of the Regional Medical Programs.

d. Secure information about the programs of the American Hospital Association, Catholic Hospital Association and Veterans Administration.

e. Obtain information about the programs of other professional organizations such as the American Library Association and its divisions, the American Society for Information Science, the Catholic Library Association and the Special Libraries Association.

f. Obtain information about the institutes and workshops offered by the National Medical Audiovisual Center.

For each of these sources an attempt was made to determine requirements for admission to their programs, levels at which they are aimed, duration, cost, the frequency with which they are given, number of people admitted to the programs, and what they actually give as opposed to what they say they give, e.g. in terms of frequency of offerings.

3. Develop a plan for continuing education for all levels of medical librarianship.

This plan was to be based on the data collected in steps 1 and 2 above, taking into account the best forms for delivering continuing education, e.g. workshops, institutes, printed material, programmed texts.

4. Design, administer and evaluate some subset of the plan designed in step 3 above.

Amended Research Plan and Organization of this Report

As the study proceded a variety of information came to light which made it necessary to revise the methods of procedure outlined above. The primary reasons for the revisions are:

1. The data from the Kronick, Rees, Rothenberg studies (1, 2, 3, 4, 5) were not available in their raw form.
2. The data from the 1969 Directory of Health Sciences Libraries was judged to be sufficiently out-of-date to preclude its use in this study. Therefore it was decided to use the data from the 1973 survey of Health Science Libraries as the basis for this study. While some of this data has now been made available (7, 8) the raw data and tapes were not accessible during the present project period so could not be used in this study.
3. The literature of continuing professional education is largely descriptive and is referenced primarily by individual professions. A comprehensive search of this literature did not uncover an adequate methodology for assessing the continuing education needs of an entire profession nor a viable plan for evaluating the impact of a continuing education program on changes in knowledge, attitudes and skills of practicing professionals. In addition, the few evaluation studies found did not attempt to relate changes in knowledge, attitudes or skills to impact on practice. However, an extensive review was carried out and is reported in Working Paper No. 1 (see Project Bibliography).

4. A search of the literature of education convinced us that so many variables impact on the best form for delivering continuing education that to make statements regarding best form are at best foolhardy.
5. Due to delays in automating the MIA records, quantitative data from past continuing education courses was unavailable, although descriptive information was obtained.

For the reasons stated above the methods of procedure for this study were revised, the following procedures were undertaken and are described in this report:

1. An extensive review of problems and programs in continuing professional education, referred to in 3 above, was undertaken and reported in Working Paper no. 1.
2. The literature of medical librarianship for the years 1970 to 1974 was reviewed, and compared with the literature of the field in 1961 through 1969. Changes in the field were documented and their implications for continuing education were explicated. (Chapter II and Working Paper #4).
3. Two surveys were made to ascertain the subject areas in which medical library personnel perceive a need for continuing education. (Chapter III)
4. Organizations which might sponsor continuing education relevant to health sciences librarianship were determined and information regarding operating programs was obtained and analyzed. This information formed the basis for a Continuing Education Clearinghouse which is being maintained. (Chapter IV)

5. A survey to ascertain the extent to which the medical librarians' place of employment supports or constrains continuing education was conducted. (Chapter V)
6. Professional and trade associations were surveyed for information regarding how they organized and what methods and/or devices they utilized in assisting their members in continuing learning. (Chapter VI)
7. Data from the above procedures were analyzed and the implications for continuing education planning for health sciences library personnel were considered. (Chapter VII)
8. A pilot project was undertaken to determine the appropriateness and ability of an organization such as the Medical Library Association to conduct programs in areas identified as being desirable but sensitive such as inter-racial awareness and inter-personal attitudinal change. This resulted in Working Paper No. 3.
9. A publication was prepared to assist people designing and teaching continuing education courses both within the Medical Library Association's program and in continuing library education programs generally. This publication was distributed to all instructors teaching in the MLA program at the MLA 1975 annual meeting for comment and evaluation. (Discussed in Chapter VIII and appended as Working Paper No. 2)
10. The Medical Library Association's continuing education program was restructured to be responsive to information obtained and experiences gained during the course of the present project. The results of this are evidenced by new

programs that were developed, reorganization of existing procedures, and changes in staff/committee responsibilities. (Chapter XIII and Working Paper No. 3)

11. The impact of this grant on continuing medical library education has been evaluated in addition to an examination of the directions that future programming is likely to take, both within the Association and within the profession.

While the conclusions and recommendations derived from this investigation are based on more subjective data than the original study design anticipated, they are significant in three additional areas: 1) they provide documentation of trends in medical library continuing education, 2) they emphasize the difficulty of conducting a quantified study of the educational needs of an entire profession, given the present condition of systematic knowledge in continuing professional education, and 3) they explicate directions for research necessary prior to undertaking quantitative studies of continuing education needs.

Footnotes

1. Kronick, D.A., Rees, A.M., Rothenberg, L. An investigation of the educational needs of health sciences library manpower: I. Definition of the manpower problems and research design. Bull. of Med. Libr. Ass. 58: 7-17 (January) 1970.

2. Rothenberg, L., Rees, A.M., Kronick, D.A. An investigation of the educational needs of health sciences library manpower: II. Health-related institutions and their library resources. Bull. of Med. Libr. Ass. 58: 510-20 (October) 1970.

3. Rothenberg, L., Kronick, D.A., Rees, A.M. An investigation of the educational needs of health sciences library manpower: III. Manpower supply and demand in health sciences libraries. Bull. of Med. Libr. Ass. 59: 21-30 (January) 1971.

4. Rothenberg, L., Rees, A.M., Kronick, D.A. An investigation of the educational needs of health sciences library manpower: IV. Characteristics of manpower in health sciences libraries. Bull. of Med. Libr. Ass. 59: 31-40 (January) 1971.

5. Kronick, D.A., Rees, A.M. An investigation of the educational needs of health sciences library manpower: V. Manpower for hospital libraries. Bull. of Med. Libr. Ass. 59: 392-403 (July) 1971.

6. Schick, F. L. ed. Directory of health sciences libraries in the United States, 1969. Chicago, American Medical Assoc., Medical Library Association, 1970.

7. Crawford, Susan. Health Sciences Libraries in the United States, 1961-1973. Unpublished report to the Committee on Surveys and Statistics of the Medical Library Association, June, 1974.

8. Crawford, Susan and Dandurand, Gary. Directory of Health Sciences Libraries in the United States, 1973. Chicago, American Medical Association, 1974.

CHAPTER II

CONTINUING EDUCATION NEEDS AS REFLECTED BY CHANGES IN THE PUBLISHED LITERATURE

The need for continuing education is a need intuitively felt by most library staffs. However, we wished to document the need in some more objective way than depending solely on the perceived felt needs of individuals. In the absence of task analysis data at different points in time, the approach of analysing the published journal literature at the present time, and comparing it with the published literature five and ten years ago, seemed to be an approach which would document changes in the field in an objective manner. It was realized that the journal literature might lag behind actual practice, but this time lag in the literature would apply to that of ten years ago as well as to today.

A review of the literature was therefore made to assess changes as reflected in the literature covered, and then to relate these changes to specific areas of health sciences librarianship. These areas, in light of the changes that have taken place, reflect some of the needs for continuing education for health sciences library staffs and could be compared with the staffs' perceived needs.

The survey was limited to the literature of the past five years and was the third piece in a set of reviews that began with Pendrill, 1961-65 (1) and was followed by Bishop, 1965-69 (2). As in their efforts, there may be some overlap. In addition, a thorough

treatment of health sciences libraries appeared as the July 1974 issue of Library Trends (3). This last, however, instead of attempting a comprehensive review as did Pendrill and Bishop, had as its objective the provision of an "overview of the total impact that changes have had on the traditional user services, including a final chapter projecting what the trends of the future will be to meet the needs of the health science user." (4, p.3)

The author started with the three compilations mentioned earlier: Pendrill, Bishop and LT. These covered a substantial portion of the pertinent literature published between 1961 and early 1973, although in the case of LT, earlier references were included. For the period 1970-74, all issues of the Bulletin of the Medical Library Association (BMLA) were analyzed and the topics represented compared with topics discussed in the other three works. In addition, a broad literature search was conducted (1970-74) in library and information science literature. From items retrieved, the reviewer selected a few that were of interest in documenting changes that have occurred. This selection was highly subjective and the exclusion of any work from the bibliography does not in any way imply a value judgement on the merits of the work in question. Rather, it reflects the constraints of time and the author's own bias. It cannot be emphasized too strongly that beyond a close analysis of the three reviews and the last five years of BMLA, inclusion of pertinent literature was only minimally attempted.

Contrary to the approach adopted by Bishop, the present review was not restricted to the periodical literature, although it is

principally that. Also, some changes that appear to be important have not yet received adequate documentation in the literature sources closely analyzed, so the author included relevant citations from sources other than "library literature" when such inclusion seemed appropriate. Only the picture for the United States was examined.

The full results of the review are detailed in Working Paper No. 4 (252). The major findings are reported in this chapter, and the full bibliography of papers examined is listed to show the scope of the review.

RESULTS

The literature was reviewed within the framework of six areas most frequently mentioned by the directors of medical libraries as needing attention (30). These six areas, in order of importance, are:

1. Automation/Computer Applications
2. Non-Book Materials/Multi-Media
3. Administration/Management
4. Information Retrieval Systems/Information Science
5. Content/Subject Matter Expertise
6. Reference/Bibliography

1 - Automation/Computer-Applications - For the time covered by the review, this area has seen the move from experimental batch mode operations to on-line operational applications, even to the extent of mini-computer utilization. This is clearly an important subject area and one in which different levels of sophistication are needed. It appears that computer applications will continue to progress and any continuing education program should take this in account and have a high degree of adaptability built into it.

2 - Non-Book Materials/Multi-Media - This area probably represents an even more fluid if not chaotic picture than the one above. This may be due to the fact that we were further behind in this area. There is some question whether or not we even knew this area existed. However, despite our slow start, we are closing rapidly. Noticeable strides are being made in hardware and software control, but the ideal is far from realized. The biomedical communications network is functioning and evolving, and the audiovisual component is alive and well. Computer assisted instruction is making itself felt although still a toy for many. Again, the variance in sophistication among health sciences librarians underscores the need for flexibility in any continuing education approach.

3 - Administration/Management - Some positive things appear to be happening with regard to this topic; namely, educational programs, and continuing education opportunities. Judging from the lack of literature on the topic, awareness of the problems may be lacking. If such is the case, it is largely a matter of self-definition and basic education in the areas of human relations and scientific management. Once these deficiencies are overcome, we may be ready for the more difficult task of organizational change.

4 - Informational Retrieval Systems/Information Science - Trying to keep up with the on-line data bases that seem to be developing daily is a task facing most health sciences librarians. For the even more important tasks of systems design and evaluation, we are again faced with different levels of need. The design of a small manual SDI system for a few well-defined users is not the

same thing as research and design of a national, on-line data base, but both are important and both are needed.

5 - Content/Subject Matter Expertise - This may be no more than a bugaboo, or it may be the key ingredient in the survival of the health sciences librarian. However, it will continue to receive attention from within and without the profession. Accordingly, it is felt that a program should be investigated that will provide a symbiotic approach to the subject disciplines represented. For most of those who have a need for improved subject competency, there is not enough time in which to acquire it by traditional methods. Some type of immersion process may be what is called for where the health sciences librarian is totally submerged in a well-balanced biomedical overview. The result is not an expert in any given discipline, but one who understands the terminology of many disciplines and can relate one to another.

6 - Reference/Bibliography - As noted by earlier reviewers, health sciences librarians do not write much about what is undoubtedly their most important function--bringing the user and information together. Some user studies are reported, but one has the impression that more products and services are based on the intuitive approach than on factual data. Library instruction has received attention, but "selling" a product or service to the library's constituency has not. If library services were utilized by all those who have a need for them, could we survive? For application to a continuing education program it appears that here again is an area in which there is a need to define the objectives of

the library before we set about changing the way in which we attempt to accomplish these objectives. Perhaps many will not see the need for a theoretical approach to the reference function, but it is exactly our own lack of understanding of the basic aspects of the information transfer process that continues to plague us.

The work reported in this chapter has attempted to document change within the profession in the past fifteen years. It was initially hypothesized that the half life of most librarians' first professional degree was shrinking and that this required the availability of well planned continuing education programming. On the basis of the results obtained in this review, this hypothesis has been proven.

Footnotes

1. Pendrill, G.R.. "Medical libraries and medical literature." pp.71-109 in Sewell, P.H. Five Years Work in Librarianship, 1961-65. London: Library Association, 1968.

2. Bishop, David. "Control and dissemination of information in medicine." In Voigt, Melvin (ed.) Advances in Librarianship. 2:45-102, 1971.

3. "Health Sciences Libraries." Adams, J.T. (ed.) Library Trends, 23:3-175 (July) 1974.

4. Adams, J.T. "Introduction." Library Trends, 23:3-6 (July) 1974.

5. Allen, L.A. Continuing Education Needs of Special Libraries. New York: Special Libraries Association, 1974. 54pp.

6. Stone, E.W.; Patrick, R.J. and Conroy, Barbara. Continuing Library and Information Science Education. Final Report to the National Commission on Libraries and Information Science. Washington, D.C.: American Society for Information Science, 1974.

7. Stone, E.W. Continuing Library Education as Viewed in Relation to Other Professional Continuing Education Movements. (Washington, D.C.: ASIS, 1974.

8. Pendrill, G.R. "The information needs of the medical profession and future staff requirements of medical libraries: implications for the education and training of medical librarians." In Proceedings of the Third International Congress of Medical Librarianship, Amsterdam, 5-9 May 1969. Amsterdam: Excerpta Medica, 1970. pp.261-74.

9. Brodman, E. "The Medical Library Association's experience with continuing education." In Third Congress, pp.301-7.

10. Felter, J.W. "Continuing education for medical librarians: recent United States experience." In Third Congress, pp.299-300.

11. Watterson, R.M. "The Medical Library Association's current program in continuing education." In Third Congress, pp.308-14.

12. Gartland, H.J. "Veterans Administration library service education programs, with some additional remarks on the programs of the American Hospital Association," In Third Congress, pp. 315-26.

13. Rees, A.M. "Modifications of curriculum for biomedical libraries in library schools and incorporation of instruction in the newer information technology." In Third Congress, pp.275-90.

14. Rees, A.M. and Rothenberg, Lesliebeth. "An analysis of the demographic, educational, and employment characteristics of participants in the continuing education program of the Medical Library Association, Denver, Colorado, June 1968." Bulletin of the Medical Library Association (BMLA), 58:159-62 (April) 1970.

15. Darling, Louise. "Changes in information delivery since 1960." Library Trends, 23:31-62 (July) 1974.

16. Dryer, B.V. "Lifetime learning for physicians: principles, practices, proposals." Journal of Medical Education, 37:1-134 (June) 1962. Pt.2.

17. Miller, G.E. "Continuing education for what?" Journal of Medical Education, 42:324 (April) 1967.

18. Schoolman, H.M. "The future: libraries, librarians and users." Library Trends, 23:165-75 (July) 1974.

19. Brandon, A.N. "Academic status for medical school librarians." BMLA, 58:1-6 (January) 1970.

20. Kronick, D.A.; Rees, A.M.; and Rothenberg, Lesliebeth. "An investigation of the educational needs of health sciences library manpower. I. Definition of the manpower problem and research design." BMLA, 58:7-17 (January) 1970.

21. Rothenberg, Lesliebeth; Rees, A.M.; and Kronick, D.A. "An investigation of the educational needs of health sciences library manpower: II. Health-related institutions and their library resources." BMLA, 58:510-20 (October) 1970.

22. Rothenberg, Lesliebeth; Kronick, D.A.; and Rees, A.M. "An investigation of the educational needs of health sciences library manpower. III. Manpower supply and demand in health sciences libraries." BMLA, 59:21-30 (January) 1971.

23. Rothenberg, Lesliebeth; Rees, A.M.; and Kronick, D.A. "An investigation of the educational needs of health sciences library manpower. IV. Characteristics of manpower in health sciences libraries." BMLA, 59:31-40 (January) 1971.

24. Kronick, D.A.; Rees, A.M.; and Rothenberg, Lesliebeth. "An investigation of the educational needs of health sciences library manpower. V. Manpower for hospital libraries." BMLA, 59:392-403 (July) 1971.

25. Rothenberg, L.; Lucianovic, Judith; Kronick, D.A.; and Rees, A.M. "A job-task index for evaluating professional utilization in libraries." Library Quarterly, 41:320-8 (October) 1971.

26. Kronick, D.A.; Rees, A.M.; and Rothenberg, Lesliebeth. "An investigation of the educational needs of health sciences library manpower: VII. Summary and conclusions." BMIA, 60:292-300 (April) 1972.

27. Darling, Louise. "The view behind and ahead: implications of certification." BMIA, 61:375-86 (October) 1973.

28. "Library education and manpower." American Libraries, 1: 341-5 (April) 1970.

29. Asheim, Lester. "The preparation and use of library manpower." BMIA, 60:288-91 (April) 1972.

30. Fink, C.D. A Forecast of Events and Conditions that Might Affect Job and Training Requirements for Medical Librarians, Alexandria, Virginia: Human Resources Research Organization, 1973. Technical Report 73-30, HumRRO-TR-73-30.

31. "Continuing library education." BMIA, 62:70-1 (January) 1974.

32. Baker, D.B. "Communication or chaos?" Science, 169:739-42 (August 21) 1970.

33. Orr, Richard and others. "Communication problems in biochemical research: report of a study" Federation Proceedings, 23:1117-76 (September-October) and 23: 1297-1331 (November-December) 1964.

34. Heumann, K.F. "Biomedical literature and information services." Federation Proceedings, 33:1693 (June) 1974.

35. Bottle, R.T. "Biomedical literature and information services." Federation Proceedings, 33:2693-5 (June) 1974.

36. Krudy, E.S. "New approach to dissemination of scientific information." Federation Proceedings, 33:1695-7 (June) 1974.

37. Day, S.B.; Old, Lloyd; and Good, R.A. "Communication of scientific information at a cancer research institute." Federation Proceedings, 33:1699-1701 (June) 1974.

38. Altman, P.L. "Biological handbooks: compilations, processing, and dissemination of data." Federation Proceedings, 33:1701-1711 (June) 1974.

39. Tate, F.A. "Access to the biomedical literature through services produced at Chemical Abstracts Service." Federation Proceedings, 33:1712-14 (June) 1974.

40. Kennedy, H.E. and Fisher, D.A. "Information support for the biomedical sciences." Federation Proceedings, 33:1714-17 (June) 1974.

41. Day, M.S. "Computer-based retrieval services at the National Library of Medicine." Federation Proceedings, 33:1717-8 (June) 1974.

42. Blanken, R.R. and Stern, B.T. "Excerpta Medica's system for the automated storage and retrieval of biomedical information." Federation Proceedings, 33:1719-21 (June) 1974.

43. Flanagan, Dennis. "The future of scientific communication." Federation Proceedings, 33:1721-3 (June) 1974.

44. Cummings, M.M. "Publications: progress or pollution." American Scientist, 61:163-66 (March-April) 1973.

45. Brown, W.S.; Pierce, J.R.; and Traub, J.F. "The future of scientific journals." Science, 158:1153-9 (December) 1967.

46. Brown, W.S. and Traub, J.F. "MERCURY:a system for the computer-aided distribution of technical reports." Journal of the Association of Computing Machinery, 16:13-25 (January) 1969.

47. Lowry, W.K. "Use of computers in information systems." Science, 175:841-6 (February 25) 1972.

48. "Symposium on the primary journal." Journal of Chemical Documentation, 10:26-46 (February) 1970.

49. Herschman, Arthur. "The primary journal: past, present and future." Journal of Chemical Documentation, 10:37-41 (February) 1970.

50. Bush, Vannevar. "As we may think." Atlantic Monthly, 176: 101-8 (July) 1945.

51. Moore, J.A. "An inquiry on new forms of primary publications." Journal of Chemical Documentation, 12:75-8, 1972.

52. Kuney, J.H. "The role of microforms in journal publications." Journal of Chemical Documentation, 12:78-9, 1972.

53. Veaner, A.B. Evaluation of Micropublications. Chicago: American Library Association, 1971. 59pp.

54. Spigai, F.G. "The invisible medium: the state of the art of microform and a guide to the literature." Stanford: ERIC Clearinghouse on Media and Technology, 1973. 31pp.

55. Adams, Scott. "Foreign users of U.S. bibliographic data bases in biology and medicine." Library Trends, 23: 153-64 (July) 1974.

56. Lorenzi, N.M. and Young, K.P. "New information transfer therapies." Library Trends, 23:109-26 (July) 1974.

57. Beatty, W.K. and Beatty, V.L. "Improvements in recordkeeping and use." Library Trends, 23:127-52 (July) 1974.

58. Mason, Ellsworth. "'The great gas bubble prick't' or, computers revealed--by a gentleman of quality." College and Research Libraries, 32:183-96 (May) 1971.

59. Warheit, L.A. "When some library systems fail." Wilson Library Bulletin, 46:52-8 (September) 1971.

60. Salton, G. "Computers and libraries--a reply." Library Journal, 96:3277-82 (October 15) 1971.

61. Rogers, F.B. "Computerized bibliographic retrieval services." Library Trends, 23:73-88 (July) 1974.

62. Beckwith, H.K. "Mechanization of library procedures in the medium-sized medical library: IX. Holding statements in PHILSOM: A study of their activity." BMIA, 58: 120-25 (April) 1970.

63. Coe, M.J. "Mechanization of library procedures in the medium-sized medical library: X. Uniqueness of compression codes for bibliographic retrieval." BMIA, 58:587-97 (October) 1970.

64. Miller, J.K. "Mechanization of library procedures in the medium-sized medical library:XI. Two methods of providing selective dissemination of information to medical scientists." BMIA, 58:378-97 (July) 1970.

65. Ohta, Miwa and Evans, G.T. "Mechanization of library procedures in the medium-sized medical library: XII. An information retrieval system: a combination of a manual selective dissemination of information, and a personal file indexing system by computer." BMIA, 58:112-19 (April) 1970.

66. Howard, Ellen and Kharibian, Gloria. "Mechanization of library procedures in the medium-sized medical library: XIII. Computer applications in hospital departmental libraries." BMIA, 60:445-57 (July) 1972.

67. Fenske, R.E. "Mechanization of library procedures in the medium-sized medical library: XIV. Correlations between National Library of Medicine classification numbers and MeSH headings." BMLA, 60:319-24 (April) 1972.

68. Lemkau, H.I. and Straub, J.R. "The design of the automated serials accession system at the library of the Mount Sinai School of Medicine of the City University of New York." BMLA, 58:163-72 (April) 1970.

69. Love, Erika; Butzin, Diane; and Robinson, R.E. III. "Reclassification and documentation in a medium-sized medical center library: the MTST system in the simultaneous production of catalog cards and a computer stored record using natural language data processing techniques." BMLA, 59:41-9 (January) 1971.

70. Koch, M.S. and Kovacs, Helen. "Computer information project for monographs at the Medical Research Library of Brooklyn." BMLA, 61:297-301 (July) 1973.

70a. Kilgour, F.G. "History of library computerization." Journal of Library Automation, 3:218-29 (September) 1970.

71. "Health science library automation." MLA News, No. 60 (November) 1974. p.8.

72. Hopkins, Judith. "The Ohio College Library Center." Library Resources and Technical Services, 17:308-19 (Summer) 1973.

73. Kilgour, F.G. "Standardization for interchange of cataloging records--MARC II." Third Congress, pp. 103-9.

74. Rees, T.H., Jr. "Use of the Library of Congress MARC II format for a union list of serials." Third Congress, pp. 110-13.

75. Divett, R.T.; Jones, W.W.; and Dahl, E.S. "A file structure for an automated library catalog." Third Congress, pp. 114-27.

76. "Williams & Wilkins: the great leap backward." BMLA, 60: 342-6 (April) 1972.

77. "License for photocopy." BMLA, 60:582-3 (October) 1972.

78. "Medical organizations support photocopy practices." BMLA, 60:598 (October) 1972.

79. "Copyright and reproduction." BMLA, 61:344-5 (July) 1973.

80. "Williams & Wilkins capitulates." BMLA, 61:58-60 (January) 1973.

81. "Members vote for clarification of S.1361." MIA News, No. 55 (June) 1974, p.2.

82. "MIA argues 'fair use' in interpretation." MIA News, No. 59 (October) 1974, p.2.

83. "Xerox develops technique to prevent copying of documents." MIA News, No. 59 (October) 1974, p.7.

84. Prior, J.A. "Plans for new information systems and health sciences library at the Ohio State University." Third Congress, p.487-93.

85. "UCIA develops on-line serials control system." BMIA, 59: 524 (July) 1971.

86. Fayollat, James. "On-line serials control at UCIA." Proceedings of the 1972 Clinic on Library Applications of Data Processing. Urbana, Illinois: University of Illinois, 1972. pp.69-81.

87. Brudvig, G.L. "The development of a minicomputer system for the University of Minnesota Bio-Medical Library." Proceedings of the 1974 Clinic on Library Applications for Data Processing, Urbana: University of Illinois (In Press).

88. Grosch, A.H. "Mini-computer-characteristics, economics, and selection for an integrated library management system." Proceedings of the 1974 Clinic on Library Applications of Data Processing. Urbana: University of Illinois (In Press).

89. Lourey, E.D. "Systems design for a mini-computer based library data management system." Proceedings of the 1974 Clinic on Library Applications of Data Processing, Urbana: University of Illinois (In Press).

90. Lieberman, James. "The videorecord: new mode for learning." BMIA, 60:22-5 (January) 1972.

91. Closurdo, J.S. and Pehkonen, C.A. "PAIR: a cooperative effort to meet informational needs." BMIA, 61:201-4 (April) 1973.

92. Crawford, Susan. "Audiovisual materials." In Annan, G.L. and Felter, J.W. (eds.) Handbook of Medical Library Practice, 3rd ed. Chicago: Medical Library Association, 1970. pp.222-40.

93. Meiboom, Esther. "A film program in a teaching hospital." BMIA, 61:416-21 (October) 1973.

94. Kronick, D.A. "Nonprint media as information resources: software and hardware." BMIA, 62:19-24 (January) 1974.

95. "Microfilm forum: experiences, problems, and plans of microfilm users." Journal of Chemical Documentation, 10: 3-25 (February) 1970.

96. Sullivan, R.C. "Microform developments related to acquisitions." College and Research Libraries, 34:16-28 (January) 1973.

97. Hawken, W.R. "Systems instead of standards." Library Journal, 98:2515-25 (September 15) 1973.

98. Smith, L.C. "The medical librarian and computer-assisted instruction." BMIA, 62:6-18 (January) 1974.

99. "NIM experiments with computer assisted instruction." BMIA, 61:360 (July) 1973.

100. "Ohio to distribute independent study materials." BMIA, 61:76-7 (January) 1973.

101. "NIM funds CAI materials." BMIA, 61:78 (January) 1973.

102. "Illinois installs CAI facility." BMIA, 60:602-3 (October) 1972.

103. Brigham, C.R. and Kamp, Martin. "The current status of computer-assisted instruction in the health sciences." Journal of Medical Education, 49:278-9 (March) 1974.

104. "Educational technology for medicine: roles for the Lister Hill Center." Journal of Medicine Education, 46: Supp.: 1-97 (July) 1971.

105. "Biomedical communications network 70's--analysis of the AAMC report." Smythe, C.M. In Media 70's National Conference on Multimedia in the Health Sciences, Proceedings, Fairfax, Virginia: Educational Communications Foundation, 1971. pp.104-9.

106. "Lister Hill Center continues satellite communications experiments." NIM News, 25:3 (June) 1970.

107. "Medical instruction via satellite saves two lives." NIM News, 26:3-4 (September-October) 1971.

108. "MEDLINE queried via satellite." NIM News, 27:3 (May) 1972.

109. "Medical instruction via satellite saves life." NIM News, 27:3-4 (July) 1972.

110. "New satellite experiments planned." NLM News, 27:1-2 (September) 1972.

111. "The Lister Hill Center and telecommunications networks." NLM News, 28:2-4 (January-February) 1973.

112. McCarn, D.B. "Planning for on-line bibliographic access by the Lister Hill National Center for Biomedical Communications." BMLA, 58:303-10 (July) 1970.

113. Lancaster, F.W. "Evaluation of on-line searching in MEDLARS (AIM-TWX) by biomedical practitioners." University of Illinois Graduate School of Library Science, No. 101 (February) 1972. 20pp.

114. Davis, Ruth. "The national biomedical communications network as a developing structure." BMLA, 59:1-20 (January) 1971.

115. Schoolman, H.M. "NLM regional medical library program." BMLA, 60:284-5 (April) 1972.

116. Pings, V.M. "Regional medical library program development." BMLA, 60:274-83 (April) 1972.

117. Fink, W.R.; Bloomquist, Harold; and Allen, R.G. "The place of the hospital library consortium in the national biomedical communications network." BMLA, 62:258-65 (July) 1974.

118. Darling, Louise. "Personal views on personnel administration." BMLA, 58:346-9 (July) 1970.

119. McGregor, D.M. "The human side of enterprise." In McGregor, D.M. Leadership and Motivation, Cambridge: MIT Press, 1966. pp.3-20. Reprinted in Wasserman, Paul and Bundy, M.L. Reader in Library Administration, Washington, D.C.: Microcard Editions, 1968. pp.210-6.

120. Carroll, S.J., Jr.; and Tose, H.L., Jr. Management by Objectives, Applications and Research, New York: MacMillan, 1973. 216pp.

121. "Management education: implications for libraries and library schools." Library Quarterly, 43:281-393 (October) 1973.

122. Johnson, E.R. "Applying 'management by objectives' to the university library." College and Research Libraries, 34:436-9 (November) 1973.

123. Kipp, L.J. "Management literature for librarians." Library Journal, 97:158-60 (January 15) 1972.

124. Stone, E.W. (ed.) "Personnel development and continuing education in libraries." Library Trends, 20:3-183 (July) 1971.

125. Stone, E.W. (ed.) New Directions in Staff Development, Chicago: American Library Association, 1971. 66pp.

126. Myers, M.S. Every Employee a Manager. New York: McGraw-Hill, 1970. 233pp.

127. Renfro, K.R. "Raters and Rating." Mountain-Plains Library Quarterly, 16:3-32 (November) 1971.

128. Johnson, Marjorie. "Performance appraisal of librarians--a survey." College and Research Libraries, 33:359-67 (September) 1972.

129. Peele, David. "Evaluating library employees." Library Journal, 97:2803-7 (September 15) 1972.

130. Yeh, T.Y. "Library peer evaluation for promotion and merit increase: how it works." College and Research Libraries, 34:270-4 (July) 1973.

131. Levinson, Harry. "Management by whose objectives." Harvard Business Review, 48:125-34 (July-August) 1970.

132. Merchant, M.P. "Participative management as related to personnel development." Library Trends, 20:48-59 (July) 1971.

133. Kaplan, Louis. "Participation: some basic considerations on the theme of academe." College and Research Libraries, 34:235-41 (September) 1973.

134. Howard, E.N. "The orbital organization." Library Journal, 95:1712-5 (May 1) 1970.

135. Heinritz, F.J. "Quantitative management in libraries." College and Research Libraries, 31:232-3 (July) 1970.

136. DeProspo, E.R. and Altman, Ellen. "Library measurement, a management tool." Library Journal, 98:3605-7 (December 15) 1973.

137. Smith, Eldred. "Do libraries need managers?" Library Journal, 94:502-6 (February 1) 1969.

138. Summer, Williams. "A change in budgetary thinking." American Libraries, 2:1174-80 (December) 1971.

139. Jenkins, H.R. "The ABC's of PPB." Library Journal, 96: 3089-93 (October 1) 1971.

140. Fazar, Willard. "Program planning and budgeting theory." Special Libraries, 60:423-33 (September) 1969.

141. Howard, E.N. "Toward PPBS in the public library." American Libraries, 2:386-93 (April) 1971.

142. Tudor, Dean. "The special library budget." Special Libraries, 63:517-27 (November) 1972.

143. McInnis, R.M. "The formula approach to library size: an empirical study of its efficacy in evaluating research libraries." College and Research Libraries, 33:190-98 (May) 1972.

144. Koenig, E.D. and others. "SCOPE: a cost analysis of an automated serials record system." Journal of Library Automation, 4:129-40 (September) 1971.

145. Burgess, T.K. "A cost effectiveness model for comparing various circulation systems." Journal of Library Automation, 6:75-86 (June) 1973.

146. Mount, Ellis and Fasana, Paul. "An approach to the measurement of use and cost of a large academic research library system: a report of a study done at Columbia University libraries." College and Research Libraries, 33:199-211 (May) 1972.

147. Bommer, Michael and Ford, Bernard. "A cost-benefit analysis for determining the value of an electronic security system." College and Research Libraries, 35:270-9 (July) 1974.

148. Slater, Frank (ed.) Cost Reduction for Special Libraries and Information Centers. Washington, D.C.: ASIS, 1973. 187pp.

149. Wilson, J.H. "Costing for libraries: a summary review of the recent literature." In Slater, Frank (ed.) Cost Reduction for Special Libraries and Information Centers. Washington, D.C.: ASIS, 1974. pp.2-21.

150. Bookstein, Abraham, and Swanson, D.R. "Introduction." Library Quarterly, 42:1-5 (January) 1972.

151. Morse, Philip. Library Effectiveness, a systems approach. Cambridge: MIT Press, 1968. 207pp.

152. "Operations Research: implications for libraries." Library Quarterly, 42:1-158 (January) 1972.

153. Evans, Edward; Borko, Harold; and Ferguson, Patricia. "Review of criteria used to measure library effectiveness." BMIA, 60:102-110 (January) 1972.

154. "Library effectiveness." BMIA, 60:584 (October) 1972.

155. Orr, R.H. "Development of methodologic tools for planning and managing library services: IV. Bibliography of studies selected for methods and data useful to biomedical libraries." BMIA, 58:350-77 (July) 1970.

156. Orr, R.H. and Schless, A.P. "Document delivery capabilities of major biomedical libraries in 1968: results of a national survey employing standardized tests." BMIA, 60:382-422 (July) 1972.

157. Huntley, J.L. and Orrok, P.A. "The hospital library profile as an evaluation mechanism." BMIA, 58:403-14 (July) 1970.

158. Waller, S.B. "Thoughts on cataloging and classification in a small medical library." BMIA, 58:51-7 (January) 1970.

159. Frohlich, Jean. "Budgeting for hospital libraries." BMIA, 62:34-6 (January) 1974.

160. Brodman, Estelle. "Confrontation and the medical library." BMIA, 62:87-91 (April) 1974.

161. Brodman, Estelle. "The delivery of medical information in the 1970s." BMIA, 59:579-84 (October) 1971.

162. Lutz, R.P. "Costing information services." BMIA, 59:254-61 (April) 1971.

163. Cheshier, R.B. "Fees for service in medical library networks." BMIA, 60:325-32 (April) 1972.

164. Braude, R.M. and Holt, Nancy. "Cost-performance analysis of TWX-mediated inter-library loans in a medium-sized medical center library." BMIA, 59:65-70 (January) 1971.

165. Spencer, C.C. "Unit costs of interlibrary loans and photocopies at a regional medical library: preliminary report." BMIA, 58:189-90 (April) 1970.

166. Kountz, John. "Library cost analysis: a recipe." Library Journal, 97:459-64 (February 1) 1972.

167. "New library management program available at Case Western Reserve." BMIA, 62:162 (April) 1974.

168. "MIA sponsoring management institute for health sciences librarians." MIA News, No. 55 (June) 1974. p.3.

169. "Management institute to be held in Norfolk, Virginia." MIA News, No. 61 (December) 1974. p.3.

170. Jenkins, G.T. "The MEDIARS demand search quality control program." BMIA, 60:423-6 (July) 1972.

171. Leiter, J. "The work of MEDIARS." Third Congress, pp.155-65.

172. Gomes, S.S. "The nature of the use and users of the Midwest Regional Medical Library." BMIA, 58:559-77 (October) 1970.

173. Goode, D.J.; Penry, J.K.; and Caponio, J.F. "Comparative analysis of Epilepsy Abstracts and a MEDIARS bibliography." BMIA, 58:44-50 (January) 1970.

174. McCarn, D.B. "Planning for on-line bibliographic access by the Lister Hill National Center for Biomedical Communications." BMIA, 58:303-10 (July) 1970. (same as citation number 112).

175. McCarn, D.B. "Networks with emphasis on planning an on-line bibliographic access system." Information Storage and Retrieval, 7:271-9 (No.6) 1971.

176. Lancaster, F.W. "The evaluation of published indexes and abstract journals: criteria and possible procedures." BMIA, 59:479-94 (July) 1971.

177. Moll, Wilhelm. "AIM-TWX service at the University of Virginia: a review and evaluation." BMIA, 59:458-62 (July) 1971.

178. Moll, Wilhelm. "Observations on the AIM-TWX service at the University of Virginia Medical Library." BMIA, 60:571-4 (October) 1972.

179. Blase, N.G. and Stock, C.J. "An experimental cancer information service using AIM-TWX." BMIA, 60:115-20 (January) 1972.

180. Spiegel, Isabel, and Crager, Janet. "Comparison of SUNY and MEDLINE searches." BMIA, 61:205-9 (April) 1973.

181. Moll, Wilhelm, "MEDLINE evaluation study." BMIA, 62:1-5 (January) 1974.

182. McCarthy, S.E.; Maccabee, S.E.; and Feng, C.H. "Evaluation of MEDLINE service by user survey." BMIA, 62:367-73 (October) 1974.

183. Berk, R.A. An Experimental Case Study of the Diffusion of an Information Innovation in a Scientific Community. Unpublished Ph.D. Dissertation. Urbana: University of Illinois, 1974. 332pp.

184. Foreman, Gertrude; Allen, Margaret; and Johnson, Donna. "A user study of manual and MEDLINE literature searches in the hospital library." BMIA, 62:385-7 (October) 1974.

185. Soben, Phyllis, and Tidball, C.S. "***MEDLEARN***: an orientation to MEDLINE." BMIA, 62:92-4 (April) 1974.

186. Williams, M.E. "Computer searching of multiple-machine readable data bases." Mn U Bulletin, 2:45-55 (July) 1971.

187. "National Library Week Symposium II: Information for the seventies - meeting a need." Mn U Bulletin, 2:25-62 (July) 1971.

188. Sodergren, Linnea. "MEDIARS II: a review." BMIA, 61:400-7 (October) 1973.

189. Gillespie, C.J. "Computerized systems for indexing and retrieving information in psychology journals." Physiologist, 1971. pp. 289-98.

190. Garfield, E. "Citation indexing, historio-bibliography, and the sociology of science." Third Congress, pp. 187-204.

191. Caponio, J.F.; Penry, J.K.; and Goode, D.F. "Epilepsy Abstracts: its role in disseminating scientific information." BMIA, 58:37-43 (January) 1970.

192. Porter, R.J.; Penry, J.K.; and Caponio, J.F. "Epilepsy Abstracts Retrieval System (EARS): a new concept for medical literature storage and retrieval." BMIA, 59: 430-32 (July) 1971.

193. Maxson, Elizabeth, and Sprinkle, M.D. "Extending library services by using a new technology." BMIA, 60:310-14 (April) 1972.

194. Windsor, D.A. "Publications on a drug before the first report of its administration to man." BMIA, 59:433-37 (July) 1971.

195. Wilkinson, Doris and Hollander, Stephen. "A comparison of drug literature covered by Index Medicus and Drug Literature Index." BMIA, 61:431-2 (October) 1973.

196. Montgomery, R.R. "An indexing coverage study of toxicological literature." Journal of Chemical Documentation, 13:41-7 (No. 1) 1973.

197. Starker, L.N. "Pharmaceutical industry viewpoint of wordage problems--amounts, languages, and access." Journal of Chemical Documentation, 12:88-93 (No. 2) 1972.

198. "TOXLINE expands data base." BMIA, 61:465-6 (October) 1973.

199. "American Academy of Clinical Toxicology literature citation and abstracting program." Clinical Toxicology, 4:477-90 (September) 1971.

200. Eichhorn, M.M. and Reinecke, R.D. "Development and implementation of a thesaurus for the visual sciences." BMIA, 58:23-9 (January) 1970.

201. Eichhorn, M.M. and Reinecke, R.D. "Vision Information Center: a user-oriented data base." Science, 169:29-31 (July 3) 1970.

202. Minter, M.E. "This is where it's at." BMIA, 61:314-8 (July) 1973.

203. Lancaster, F.W. "Systems design and analysis for libraries." Library Trends, 21:463:603 (April) 1973.

204. Liston, D.M. "A systems approach to the design of information systems." Journal of the American Society for Information Science, 22:115-22 (March-April) 1971.

205. Swanson, D.R. "Selective dissemination of biomedical information: a series of studies and a model system." Library Quarterly, 44:189-205 (July) 1974.

206. Matheson, Nina. "User reactions to Current Contents: behavioral, social and management sciences." BMIA, 59:304-21 (April) 1971.

207. Matheson, N.W. and Sundland, D.M. "Objectives of the SDI system for mental hospital personnel in Missouri." Third Congress, pp. 399-409.

208. Yunis, S.S. "The implementation, evaluation, and refinement of a manual SDI service." BMIA, 61:4-14 (January) 1973.

209. Iodico, N.J. "Physician's referral letter bibliographic service: a new method of disseminating medical information." BMIA, 61:422-5 (October) 1973.

210. Wood, M.S. and Seeds, R.S. "Development of SDI services from a manual current awareness service to SDILINE." BMIA, 62:374-84 (October) 1974.

211. Orr, R.H.; Bloomquist, Harold; Cruzat, G.S.; and Schless, A.P. "User services offered by medical school libraries in 1968: results of a national survey employing new methodology." BMIA, 58:455-92 (October) 1970.

212. Flores de Hartmann, E. "The M.D. and the reference librarian: a breakdown in communication." Third Congress, pp. 19-23.

213. Adkins, E.F. "Syndromes difficult to find in the medical literature: a suggested project for biomedical librarians." Third Congress, p. 247-51.

214. Algermissen, Virginia. "Biomedical librarians in a patient care setting at the University of Missouri-Kansas City School of Medicine." BMIA, 62:354-8 (October) 1974.

215. "Librarian's role in patient education." MIA News, No. 55 (June) 1974. p.7.

216. "IATCH - literature attached to charts." MIA News, No. 56 (July) 1974. p.7.

217. "New roles for medical librarians - 3." MIA News, No. 59 (October) 1974. p.6.

218. "Community outreach program." MIA News, No. 61 (December) 1974. p.13.

219. "New roles for health sciences librarians - 4." MIA News, No. 60 (November) p.5.

220. Olson, E.E. "User population characteristics related to library utilization." Third Congress, pp. 16-8.

221. Williams, J.F., II and Pings, V.M. "A study of the access to the scholarly record from a hospital health science core collection." BMIA, 61:408-15 (October) 1973.

222. Pings, V.M. and Malin, J.E. "Access to the scholarly record of medicine by the Osteopathic physicians of Southeastern Michigan." BMIA, 58:18-22 (January) 1970.

223. Gillette, V.L.; Van Camp, Ann; Campbell, N.S.; and Laatz, M.J. "The Indiana biomedical information program." BMIA, 58:60-4 (January) 1970.

224. Oseasohn, Robert. "Borrower use of a modern medical library by practicing physicians." BMIA, 58:58-9 (January) 1970.

225. Ash, Joan. "Library use of public health materials: description and analysis." BMIA, 62:95-104 (April) 1974.

226. Tibbetts, Pamela. "A method for estimating the in-house use of the periodical collection in the University of Minnesota Bio-Medical Library." BMIA, 62:37-48 (January) 1974.

227. Piternick, A.B. "Measurement of journal availability in a biomedical library." BMIA, 60:534-42 (October) 1972.

228. Smith, J.M.B. "A periodical use study at Children's Hospital of Michigan." BMIA, 58:65-7 (January) 1970.

229. Meakin, F.A. and Lewis, R.F. "Bibliographic fugitives: papers presented at meetings." Third Congress, pp. 239-46.

230. Yokote, Gail and Utterback, R.A. "Time lapses in information dissemination: research laboratory to physician's office." BMIA, 62:251-7 (July) 1974.

231. Titley, J. "The medical librarian as a medical educator: the description of a course." Third Congress, pp. 327-32.

232. Dannenberg, Dena. "A course in information techniques for dental students." BMIA, 60:111-4 (January) 1972.

233. Eaton, E.S. "Library orientation." BMIA, 60:133-7 (January) 1972.

234. Borda, Eva and Murray, M.E. "Introduction to library services for allied health personnel." BMIA, 62:363-66 (October) 1974.

235. Lunin, L.F. and Catlin, F.I. "Teaching information and communication in a medical center." Journal of Medical Education, 47:658-660 (August) 1972.

236. Bell, JoAnn and Davis, J. "Sex, SIN, and dirty books." BMIA, 62:55-7 (January) 1974.

237. "RMP's funded." MIA News, No. 60 (November) 1974. p.6.

238. "Medical libraries and 'a national program for library and information services.'" MIA News, No. 61 (December) p.4-5.

239. Becker, Joseph (ed.) Proceedings of the Conference on Interlibrary Communications and Information Networks. Chicago: American Library Association, 1971. 347pp.

240. UNESCO and the International Council of Scientific Unions. UNISIST: Synopsis of the Feasibility Study on a World Science Information System. Paris: UNESCO, 1971. 92pp.

241. "Assistance programs extended." NIM News, 29:1 (September) 1974.

242. Oatfield, H. "Standardization in relation to medical librarianship: a survey." Third Congress, pp. 59-79.

243. Pizer, I.H. "Medical subject headings for small medical libraries." Third Congress, p.80-91.

244. Porter, K.I. "Standardization of serial title abbreviations." Third Congress, pp. 92-102.

245. Darling, Louise. "Integrating information services for dental schools into a health sciences library." BMIA, 58:177-85 (April) 1970.

246. Hodges, T.M. "NERMLS and the community hospital: service, education and advice." BMIA, 58:320-4 (July) 1970.

247. Cowgill, L.O. and Havlik, R.J. "Standards for special libraries." Library Trends, 21:249-60 (October) 1972.

248. Orne, Jerrold. "Standards in library technology." Library Trends, 21:286-97 (October) 1972.

249. Yast, Helen. "Standards of library service in institutions: B. In the health care setting." Library Trends, 21: 267-85 (October) 1972. See also MIA News, No. 62:7-9 (January) 1975 - "JCAH Library Standards."

250. Oatfield, Harold. "Standards." BMIA, 61:348-50 (July) 1973.

251. "NLM, NAL, and LC continue serial cooperation." BMIA, 62: 161 (April) 1974.

252. Berk, Robert, Continuing Education Needs of Health Sciences Librarians Based on the Literature. Working Paper No. 4. Continuing Education Needs of Health Sciences Librarians Grant No. NLM 01857-02. 126 p. 1975.

CHAPTER III

CONTINUING EDUCATION NEEDS SURVEY

In order to obtain as broad a perspective as possible on the current perceived continuing education needs of health sciences library personnel, a survey questionnaire was developed and distributed to two groups. The first survey audience consisted of participants at various regional Medical Library Association meetings. This target audience was chosen since it was thought to be the most representative of the grassroots level of medical librarianship. Many people attending the regional meetings are not members of the Medical Library Association, nor do they have formal academic training in librarianship. The second group was a randomly chosen set of MLA members to whom a survey of employment inducements or constraints to continuing education was also distributed. (See Chapter V, page 196)

The needs survey solicited opinion as to those areas of library practice which individual library personnel felt were important to their professional development and which they would like to see included in an MLA continuing education program. While the Association had gathered suggestions for additional new courses from participants in the continuing education courses at the national meeting, a more systematic feedback from "grassroots" library personnel was desired. It was reasoned that the two groups chosen would provide a cross section of practicing librarians in a variety of geographic and specialty areas.

Question 1 (presented to the regional groups only) was a list of ten general areas of library practice (see Appendix A, p.156).

Respondents were asked to number the items in the list in the order of importance to them in terms of the areas the respondents felt to be most needed for their future professional development. Question 2 contained a list of fifty-seven hypothetical course titles and asked respondents to mark those courses they would be interested in attending. Regional group members were asked to indicate the desired course level as Beginning, Intermediate or Advanced. The MIA sample was asked only to check up to ten courses they would be interested in attending within the next three years. This was done because it was apparent from the regional responses that the respondents did not share a common understanding of what the different levels meant. Space was provided at the end of the questionnaire for suggestion of other courses and for comments. (See Appendix A, Continuing Education Needs Questionnaire - Regional Groups, and Appendix B, Continuing Education Needs Questionnaire - MIA member sample.)

The following seven Regional Medical Library Groups distributed the questionnaire at their Fall, 1973 meetings:

1) Mid-Atlantic
2) Mid-Continental
3) Mid-West
4) New York
5) Pacific Northwest
6) South Central
7) Southern

Response data were also obtained from the

8) Joint Meeting of the Northern California Medical Library

Group and the Medical Library Group of Southern California in the Winter of 1974.

Distribution of the questionnaire was in general handled by the chairperson in the local group. Each chairperson was contacted by telephone from the MIA Division of Education and briefed as to the purpose and content of the questionnaire. Each was asked to make certain that the participants knew the purpose of the questionnaire, to give instruction in filling out the questionnaires and to mail completed questionnaires back to the Division. No one from the Division oversaw the actual presentation of the questionnaires to the individual respondents. Thus, although a total of some 1100 questionnaires were mailed out, no accurate counts are available as to how many of these were actually distributed. The total number of returned questionnaires (317) has been estimated by the individual chairpersons as representing an approximate fifty percent return based on estimated meeting attendance.

In July, 1974, question two of the Continuing Education Needs Questionnaire was distributed to a sample of MIA members as an addition to the survey on organizational inducements to continuing education (See Chapter V). The C. E. Needs inventory was included there as an opportunity to obtain response data from librarians known to be MIA members along with information on the type and size of the library in which they worked. It provided greater precision in the data on the distribution and return of the questionnaires.

Five additional course titles were added to the original list based on comments made by the regional group respondents. The

new titles were : 1) consortium development and operation, 2) extension librarianship, 3) biomedical networking, 4) biomedical communications, and 5) library automation - cataloging.

Questionnaires were sent to both individual and institutional members; their being addressed in the latter case to the person designated as institutional representative. A total of 289 questionnaires were sent in the MLA sample and 213 returned, for a response rate of 75%.

Returned questionnaires from both groups showed many "errors" in completion. Typical of these was the mere checking of items in question 1 rather than the requested numbering, and a simple checking in question 2 rather than the "B", "I", and "A" (Beginning, Intermediate, and Advanced) requested of the regional groups.

Preliminary analysis of data showed that "correctly" filled out questionnaires did not display significantly different data patterns from those "incorrectly" filled out, thus the entire group of returned questionnaires was used for analysis, with the following category reductions: 1) In Appendix A, Question 2 totals represent all occurrences of items labeled B, I, or A, and all occurences of items simply checked.

Table 1 shows the ranking of the items in Question 1 by the regional group members. (MLA sample did not receive question 1.) Primary interest is centered on innovative services and new approaches in medical librarianship, on administrative and supervisory skills and on audio-visual materials and services. These areas reflect current interest in, and concern with, expanding roles for medical libraries and increased realization of the importance of administrative skills in libraries.

TABLE 1

AREAS FELT MOST NEEDED FOR FUTURE PROFESSIONAL DEVELOPMENT

Area	Count	Percent of Total Responses
Innovative Services and New Approaches in Medical Librarianship	213	18%
Administrative and Supervisory Skills	160	13
Library Management	147	12
Audiovisual Materials and Services	134	11
Long Range Planning and Budgeting	132	11
Computer Applications to Library Operations	106	9
Computerized Information Retrieval	85	7
Public Service and Reference	81	7
Human Relations	79	7
Technical Services	54	5
TOTAL	1191*	100%

N = 329

* total differs from N due to multiple checking

Table 2 shows the counts and ranking for the course titles listed in questionnaire order for the regional groups, the MLA sample, and for the two combined.

Table 3 lists in rank order the fifteen courses receiving the highest overall counts for the two groups surveyed. Here, as in Appendix A, question 1, respondents expressed interest in the areas of new service roles, administrative aspects of planning, budgeting and evaluation, and A-V methods and services. Again, areas expressing newly expanded roles, responsibilities, or skills were those selected most often.

A separate listing of the top ranking titles for MLA members employed in hospital libraries is given in Table 4. Table 5 lists the top ranking titles for the MLA sample in medical school or medical center libraries. Rankings for other types of libraries were not treated separately. (For a complete analysis of the size and types of libraries in the MLA member sample, see Chapter V. For the responses by type of library for the MLA sample, see Appendix C. For the complete ranking of all courses by the MLA sample see Appendix D.)

Courses appearing in the hospital librarians' top ten choices but not in the medical school and medical center librarians list included more courses in the technical aspects of library service, in the newer areas of A-V materials, MEDLINE, and preparation of patient oriented information packets for patient education.

The medical center and medical school library top ranking includes administrative selections such as staff development, networking activities, and community health care projects that do not appear in the hospital librarians' top choices. Yet there is not an

TABLE 2

CONTINUING EDUCATION NEEDS QUESTIONNAIRE
REGIONAL GROUPS AND MIA SAMPLE
COURSES INTERESTED IN ATTENDING

Course	Regional Group Count	Regional Group Rank	MIA Count	MIA Rank	Total	Overall Rank
	N=317		N=213		N=530	
Reference tools	145	4	41	12	186	6
Reference services	138	6	46	10	184	7
Nursing literature	65	47	15	49	80	46
Pharmacy literature	58	52	7	60	65	53
Dental literature	49	57	4	61	53	56
Environmental literature	52	54	14	51	66	52
History of medicine literature	80	38	12	54	92	42
Selective dissemination of information	114	13	39	21	153	12
Abstracting and indexing	88	29	28	31	116	28
Inter-library loan	68	45	10	58	78	47
Bibliographic verification	53	53	8	59	61	55
Computerized information retrieval systems	96	19	40	15	136	19
MEDLINE for health sciences librarians	113	14	40	5	153	12
MEDLINE for library administration	71	42	18	47	89	43
Descriptive cataloging	68	45	25	34	93	41
Subject classification	87	30	31	30	118	27
Serials	76	40	20	42	96	37
Binding	51	55	11	57	62	54

TABLE 2 - (Cont.)

Course	Regional Group Count N=317	Regional Group Rank	MIA Count N=213	MIA Rank	Total N=530	Overall Rank
Circulation techniques and procedures	64	48	20	42	84	45
Acquisitions	83	34	22	39	105	33
Collection development	106	16	40	15	146	15
Weeding	106	16	41	12	147	14
Archives	50	56	21	41	71	51
Rare books	6)	51	12	54	72	50
Book preservation	64	48	14	51	78	47
History of medicine	71	42	15	49	86	44
Place of the library in a medical setting	90	25	33	25	123	24
Consortium development and operation	-	-	57	6	-	-
Extension librarianship	-	-	18	47	-	-
Biomedical networking	-	-	44	11	-	-
Biomedical communication	-	-	40	15	-	-
A-V materials - selection	143	5	52	8	195	3
A-V materials - production	94	22	33	25	127	23
A-V materials - processing and storage	124	8	63	3	187	5
A-V services	125	7	63	3	188	4
Medical terminology	102	18	37	24	139	18

TABLE 2 - (Cont.)

Course	Regional Group Count N=317	Regional Group Rank	MIA Count N=213	MIA Rank	Total N=530	Overall Rank
Systems analysis	83	34	33	25	116	28
Library automation - circulation systems	75	41	20	42	95	39
Library automation - serials	92	24	22	39	114	30
Library automation - acquisitions	81	37	20	42	101	36
Library automation - cataloging	-	-	24	37	-	-
Budget preparation	148	3	- *	-	-	-
Budget administration	116	12	62	5	178	8
Measurement & evaluation of library services	168	2	88	2	256	2
Hospital administration	61	50	12	54	73	49
Library planning - building	82	36	14	51	96	37
Library planning - space allocation and equipment	119	11	37	23	156	11
Library planning - remodelling	93	23	27	32	120	26
Grant application and management	122	9	38	22	160	10
Inter-library cooperation	86	31	19	46	105	33
Public relations	84	33	27	32	111	31
Employee selection	86	31	25	34	111	31

TABLE 2 - (Cont.)

Course	Regional Group Count N=317	Regional Group Rank	MIA Count N=213	MIA Rank	Total N=530	Overall Rank
Staff development	108	15	32	29	140	17
Leadership training	90	25	41	12	131	21
Dynamics of effective group work	70	44	25	34	95	39
Human relations training	79	39	24	37	103	35
Social responsibilities of medical librarians	90	25	33	25	123	24
Medical education: implications for library service	121	10	55	7	176	9
New Roles: In the institution's continuing education and inservice training programs	169	1	111	1	280	1
New Roles: As a medical team member on patient rounds	95	21	51	9	146	15
New Roles: Preparing packages of information for patient education	90	25	40	15	130	22
New Roles: Participating in community health care projects	96	19	40	15	136	19

* Budget preparation was not a separate category in the MIA Sample.

TABLE 3

CONTINUING EDUCATION NEEDS QUESTIONNAIRE
REGIONAL GROUPS AND MLA SAMPLE
RANKED LIST OF TOP FIFTEEN COURSES

Course	Total Count
New Roles: in the institution's continuing education and inservice training program	280
Measurement & evaluation of library services	256
A-V materials - selection	195
A-V services	188
A-V materials - processing and storage	187
Reference tools	186
Reference services	184
Budget administration	178
Medical education - its implications for library service	176
Grant application and management	160
Library planning - space allocation and equipment	156
Selective dissemination of information	153
MEDLINE for health sciences librarians	153
Weeding	147
Collection development	146

N=530

TABLE 4

MIA SAMPLE IN HOSPITAL LIBRARIES
RANKED LIST OF TOP TEN COURSES

Course	Count
New Roles: In the institution's continuing education and inservice training program	49
A-V materials - processing & storage	41
A-V materials - selection	30
A-V services	28
Measurement & evaluation of library services	28
Consortium development and operation	25
Medical education: implications for library service	25
New Roles: Preparing packages of information for patient education	20
MEDLINE for health sciences librarians	19
Budget administration	19

N=75

TABLE 5

MIA SAMPLE IN MEDICAL SCHOOL AND MEDICAL CENTER LIBRARIES
RANKED LIST OF TOP TEN COURSES

Course	Count
New Roles: In the institution's continuing education and inservice training programs	37
Measurement & evaluation of library services	30
Budget administration	24
Medical education: implications for library service	22
New Roles: As a medical team member on patient rounds	21
Consortium development and operation	21
Biomedical networking	20
A-V services	20
Biomedical communication	19
Staff development	18
New Roles: Participating in community health care projects	18

N=72

absolute difference between the two groups' choices.

The hospital libraries, in general, represent much smaller libraries with 73 of the 75 reporting 500 or fewer current journal subscriptions and one reporting between 500 and 1000 subscriptions. (One did not give a response.) The medical school and medical center libraries on the other hand, range in size from one with fewer than 100 subscriptions to two with over 5,000, with 37 of the 62 in the 1,000 to 3,000 journal subscription range. (See Chapter V, Table for a complete analysis of the MLA member sample by type and size of library.)

Summary

Responses to the continuing education needs questionnaire in general reflect those areas of current interest and concern to the health sciences library personnel. These include training in areas relatively new to library science curricula such as A-V production and services, in areas reflecting career progress, such as administrative responsibility and library evaluation, and in the area of reference and reader services. As might be expected, expressed interest in administrative and supervisory skills appears from those with responsibility for the larger libraries. With the current emphasis on the utilization of the resources of the libraries at the hospital level, efficient and effective means of designing and implementing reference service appear as the areas of prime concern to this group of respondents. Thus, while both groups were interested in budget and evaluation, and both felt that they could benefit from consortium development, it is in the larger libraries that staff development and networking issues become more relevant, and at the smaller

institutions that provision of patient information and MEDLINE access were of more immediate concern.

APPENDIX A

Continuing Education Needs Questionnaire - Regional Groups

Medical Library Association
919 North Michigan Avenue
Chicago, Illinois 60611

CONTINUING EDUCATION NEEDS
QUESTIONNAIRE

We need to know which areas of medical library practice you would like to see included in our continuing education program. You can help us by filling out the following questionnaire. Thank you!

1. Please indicate which of the following areas you feel are most needed for your future professional development. Number the areas in order of their importance to you.

___Public Service and Reference
___Technical Services
___Audiovisual Materials and Services
___Administrative and Supervisory Skills
___Long Range Planning and Budgeting
___Computerized Information Retrieval
___Computer Applications to Library Operations
___Library Management
___Human Relations
___Innovative Services and New Approaches in Medical Librarianship

2. Which of the following courses would you be interested in attending? For each item you choose please indicate the level - "B" for beginning, "I" for intermediate or "A" for advanced.

___Reference tools
___Reference services
___Nursing literature
___Pharmacy literature
___Dental literature
___Environmental literature
___History of medicine literature
___Selective dissemination of information
___Abstracting and indexing
___Inter-library loan
___Bibliographic verification
___Computerized information retrieval systems
___A-V materials - selection
___A-V materials - production
___A-V materials - processing & storage
___A-V services
___Medical terminology
___Systems analysis
___Library automation - circulation systems
___Library automation - serials
___Library automation - acquisitions
___Budget preparation
___Budget administration
___Measurement & evaluation of library services

___MEDLINE for health sciences librarians
___MEDLINE for library administrators
___Descriptive cataloging
___Subject classification
___Serials
___Binding
___Circulation techniques and procedures
___Acquisitions
___Collection development
___Weeding
___Archives
___Rare books
___Book preservation
___History of medicine
___Place of the library in a medical setting
___Hospital administration
___Library planning - building
___Library planning - space allocation and equipment
___Library planning - remodelling
___Grant applications and management
___Inter-library cooperation
___Public Relations
___Employee Selection
___Staff development
___Leadership training
___Dynamics of effective group work
___Human relations training
___Social responsibilities of medical librarians
___Medical education: implications for library service

New Roles for the Librarian

___In the institution's continuing education and inservice training programs
___As a medical team member on patient rounds
___Preparing packages of information for patient education
___Participating in community health care projects
___Other new roles: (Please specify)_____

Other courses?_____

Comments?_____

Your assistance is greatly appreciated. If there is anything we can do to assist in your continuing education plans please do not hesitate to write.

Sincerely,

Julie A. Virgo, Director of
Medical Library Education

September, 1973

APPENDIX B

Continuing Education Needs Questionnaire
MIA Member Sample

We need to know which areas of medical library practice you would like to see included in our continuing education program. Which of the courses on the following page (check up to ten) would you be interested in attending within the next three years?

___Reference tools
___Reference services
___Nursing literature
___Pharmacy literature
___Dental literature
___Environmental literature
___History of medicine literature
___Selective dissemination of information
___Abstracting and indexing
___Inter-library loan
___Bibliographic verification
___Computerized information retrieval systems
___MEDLINE for health sciences librarians
___MEDLINE for library administration
___Descriptive cataloging
___Subject classification
___Serials
___Binding
___Circulation techniques and procedures
___Acquisitions
___Collection development
___Weeding
___Archives
___Rare books
___Book preservation
___History of Medicine
___Place of the library in a medical setting
___Consortium development and operation
___Extension librarianship
___Biomedical networking
___Biomedical communication
___A-V materials - selection
___A-V materials - production
___A-V materials - processing and storage
___A-V services
___Medical terminology
___Systems analysis
___Library automation - circulation systems
___Library automation - serials
___Library automation - acquisitons
___Library automation - cataloging
___Budget administration
___Measurement & evaluation of library services
___Hospital administration
___Library planning - building
___Library planning - space allocation and equipment
___Library planning - remodelling
___Grant applications and management
___Inter-library cooperation
___Public relations
___Employee selection
___Staff development
___Leadership training
___Dynamics of effective group work
___Human relations training
___Social responsibilities of medical librarians
___Medical education: implications for library service

New roles for the librarian in the following situations:

___In the institution's continuing education and inservice training programs
___As a medical team member on patient rounds
___Preparing packages of information for patient education
___Participating in community health care projects
___Other new roles: (please specify)_____

_____

Please return your completed questionnaire in the enclosed self-addressed envelope to:

Division of Education
Medical Library Association
919 North Michigan Avenue, Suite 3208
Chicago, Illinois 60611

Thank you!

APPENDIX C

CONTINUING EDUCATION NEEDS QUESTIONNAIRE
MIA SAMPLE BY TYPE OF LIBRARY

Courses	Type of Library									
	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
Reference tools	6	3	6	3	18	1	1	0	3	41
Reference services	9	7	5	1	13	1	3	2	5	46
Nursing literature	2	1	3	1	5	0	0	2	1	15
Pharmacy literature	2	1	1	0	3	0	0	0	0	7
Dental literature	1	0	0	0	2	0	0	1	0	4
Environmental literature	2	4	3	0	1	0	1	0	3	14
History of medicine literature	4	2	1	1	4	0	0	0	0	12
Selective dissemination of information	5	5	4	1	11	2	4	2	5	39
Abstracting and indexing	5	5	0	1	11	1	1	0	4	28
Inter-library loan	1	0	1	2	3	0	2	0	1	10
Bibliographic verification	2	1	0	0	3	1	0	0	1	8
Computerized information retrieval systems	7	10	6	1	6	2	1	0	7	40
MEDLINE for health sciences librarians	5	3	4	0	19	2	2	0	5	40

APPENDIX C - (Cont.)

Courses	Type of Library									
	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
MEDLINE for library administration	6	2	0	0	5	1	1	0	3	18
Descriptive cataloging	5	1	3	1	9	1	3	0	2	25
Subject classification	6	4	4	0	12	1	2	0	2	31
Serials	4	5	3	1	3	2	1	0	1	20
Binding	3	2	1	1	3	0	1	0	0	11
Circulation techniques and procedures	7	3	2	0	8	0	0	0	0	20
Acquisitions	3	1	2	3	9	2	0	0	2	22
Collection development	10	4	2	4	12	0	4	1	3	40
Weeding	6	4	4	1	18	2	4	1	1	41
Archives	3	3	1	2	7	0	1	1	3	21
Rare books	2	1	1	2	5	0	0	0	1	12
Book preservation	3	0	1	3	4	0	3	0	0	14

APPENDIX C - (Cont.)

Courses	Type of Library									
	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
History of medicine	2	2	1	2	4	0	1	1	2	15
Place of the library in a medical setting	7	3	1	1	18	1	0	1	1	33
Consortium development and operation	13	8	3	4	25	0	0	2	2	57
Extension librarianship	4	4	1	1	5	0	1	1	1	18
Biomedical networking	13	7	2	4	9	3	3	1	2	44
Biomedical communication	11	8	3	3	9	1	2	1	2	40
A-V materials - selection	12	4	3	0	30	0	0	0	3	52
A-V materials - production	9	3	2	1	13	0	0	0	5	33
A-V materials - processing and storage	9	6	3	1	41	0	0	0	3	63
A-V services	16	4	4	2	28	1	2	0	6	63
Medical terminology	6	6	1	1	17	1	1	0	4	37

APPENDIX C - (Cont.)

Courses	Type of Library									
	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
Systems analysis	5	5	2	3	5	2	5	2	4	33
Library automation - circulation systems	2	5	3	1	1	1	2	1	4	20
Library automation - serials	4	8	0	0	3	2	3	0	2	22
Library automation - acquisitions	4	5	0	2	3	2	2	0	2	20
Library automation - cataloging	9	5	0	0	6	1	1	0	2	24
Budget administration	16	8	4	3	19	1	1	1	9	62
Measurement & evaluation of library services	21	9	6	3	28	1	9	2	9	88
Hospital administration	4	1	0	0	6	0	0	0	1	12
Library planning - building	5	0	1	1	4	0	1	0	2	14
Library planning - space allocation and equipment	8	1	4	1	17	0	1	0	5	37

APPENDIX C - (Cont.)

Courses	Type of Library									
	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
Library planning - remodelling	3	2	4	0	15	0	0	0	3	27
Grant application and management	6	6	4	1	16	0	0	1	4	38
Inter-library cooperation	3	2	2	1	6	2	1	1	1	19
Public relations	5	2	4	2	8	0	1	1	4	27
Employee selection	9	4	0	1	3	2	2	1	3	25
Staff development	11	7	1	0	4	2	2	2	3	32
Leadership training	11	3	2	3	8	2	4	1	7	41
Dynamics of effective group work	7	4	2	2	5	2	0	1	2	25
Human relations training	5	3	0	3	5	0	2	2	4	24
Social responsibilities of medical librarians	12	5	1	1	13	0	0	1	0	33

APPENDIX C - (Cont.)

Courses	Type of Library									
	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
Medical education: implications for library service	17	5	0	2	25	0	2	2	2	55
New Roles: In the institution's continuing education and inservice training programs	24	13	4	6	49	1	5	1	8	111
New Roles: As a medical team member on patient rounds	10	11	1	4	17	0	2	2	4	51
New Roles: Preparing packages of information for patient education	8	2	1	1	20	0	1	2	5	40
New Roles: Participating in community health care projects	12	6	2	4		0	1	1	3	40
Other new roles	8	0	1	0	3	0	1	1	3	17
N.A.	3	1	0	2	5	1	0	0	1	13

APPENDIX D

CONTINUING EDUCATION NEEDS QUESTIONNAIRE
MIA SAMPLE
RANKED LIST OF ALL COURSES

Course	Count	Rank
New Roles: In the institution's continuing education and inservice training programs	111	1
Measurement & evaluation of library services	88	2
A-V materials - processing and storage	63	3
A-V services	63	3
Budget administration	62	5
Consortium development and operation	57	6
Medical education: implications for library service	55	7
A-V materials - selection	52	8
New Roles: As a medical team member on patient rounds	51	9
Reference services	46	10
Biomedical networking	44	11
MEDLINE for health sciences librarians	42	12
Reference tools	41	13
Weeding	41	13
Leadership training	41	13
Computerized information retrieval systems	40	16
Collection development	40	16
Biomedical communication	40	16

Course	Count	Rank
New Roles: Preparing packages of information for patient education	40	16
New Roles: Participating in community health care projects	40	16
Selective dissemination of information	39	21
Library planning - space allocation and equipment	38	22
Grant applications and management	38	22
Medical terminology	37	24
Social responsibilities of medical librarians	34	25
Systems analysis	33	26
A-V materials - production	33	26
Place of the library in a medical setting	33	26
Staff development	32	29
Subject classification	31	30
Abstracting and indexing	28	31
Library planning - remodelling	27	32
Public relations	27	32
Employee selection	25	34
Dynamics of effective group work	25	34
Descriptive cataloging	25	34
Human relations training	24	37
Library automation - cataloging	24	37
Acquisitions	22	39

Course	Count	Rank
Library automation - serials	22	39
Archives	21	41
Library automation - acquisitions	20	42
Serials	20	42
Circulation techniques and procedures	20	42
Library automation - circulation systems	20	42
Inter-library cooperation	19	46
New Roles: Other new roles	18	47
MEDLINE for library administration	18	47
Extension librarianship	18	47
Nursing literature	15	50
History of medicine	15	50
Environmental literature	14	52
Book preservation	14	52
Library planning - building	14	52
History of medicine literature	12	55
Rare books	12	55
Hospital administration	12	55
Binding	11	58
Inter-library loan	10	59
Bibliographic verification	8	60
Pharmacy literature	7	61
Dental literature	4	62

CHAPTER IV

CONTINUING EDUCATION OPPORTUNITIES

At the time this study was undertaken no clear picture of the opportunities available for the continuing education of medical library personnel existed. Thus, an attempt was made to explicate these opportunities and to collect data with regard to their geographic location, subject matter, cost, length, target population, and type of sponsoring organization. The purpose of this chapter is to report the results of this undertaking. The methods of data collection and analysis are described, followed by a discussion of the findings. The final section of this chapter includes summary statements and conclusions.

The term, continuing education opportunities, as used in this chapter, refers to educational activities of a collective nature such as short courses, library school courses open to non-degree students, workshops, institutes and the like. It does not include opportunities for individual, tutorial or informal group study.

Data Collection and Analysis

A listing of organizations that could be expected to sponsor continuing education opportunities was compiled from a variety of sources. Table 1 displays the sources consulted, the types of organizations and the number of organizations extracted from each source.

TABLE 1

SOURCES CONSULTED, TYPES OF ORGANIZATIONS AND NUMBER OF ORGANIZATIONS TO WHICH THE REQUEST FOR INFORMATION ON CONTINUING EDUCATION OPPORTUNITIES WAS MAILED

Source	Type of Organization	Number of Organizations
North American Library Education Directory and Statistics 1969-1971. Chicago: American Library Association, 1972.	Institutions of higher education known to offer programs or courses in library education.	500
1971 Directory of Institutions Offering or Planning Programs for the Training of Library Technical Assistants. Chicago: Council on Library Technology, 1971.	Institutions of higher education offering or planning programs for the training of library technical assistants.	54*
The Bowker Annual of Library & Book Trade Information. New York: R.R. Bowker Company, 1973.	National and state library associations, and state library agencies.	141**
News·Information·Data, Vol. VI, N. 11S. Rockville, Md.: RMP Service, U.S. Dept. of HEW, Public Health Service, Health Services and Mental Health Administration, July 19, 1972.	Coordinators and directors of Regional Medical Programs.	75
National Library of Medicine, Office of Public Information. Rockville, Md., July, 1971.	Regional Medical Libraries	11
Regional Medical Libraries	Resource Libraries	85

TABLE 1 - (Cont.)

Source	Type of Organization	Number of Organizations
United States Office of Education	Regional library services programs	10
National University Extension Association	Institutions of higher education having extension programs	98
American Hospital Association	State, regional and metropolitan hospital associations	116
Total	. . . . .	1090

* Includes organizations not listed in North American Library Education Directory 1969-1971.

** Includes 32 national library association, 53 state library associations and 56 state library agencies.

A letter was mailed to 1090 organizations extracted from the above sources requesting ". . . information on short courses, workshops, institutes and other continuing education activities . . . on any aspects of either general or medical librarianship." The letter also requested notification of future continuing education activities. A copy of this letter may be found in Appendix A, at the end of this chapter.

One-hundred-ninety-two organizations responded with information about continuing education opportunities. In addition to these 192 organizations, 13 other organizations sent information regarding their programs. Thus, the continuing education opportunities sponsored by 205 organizations are included in the data analyzed in this chapter. It should be noted that the vast majority of the responding organiza-

tions sent copies of promotional material and in no instance were course syllabi, lesson plans or other detailed descriptions received.

The variability in the amount and nature of the information received from the 205 organizations was great. Nevertheless, promotional brochures, catalogs and other accounts of continuing education opportunities were examined first for their relevance to medical library personnel, and secondly for content, location, cost, length, target population and type of sponsoring organization.

With regard to relevance, two members of the project staff, both medical librarians, reached agreement on the judgements that the opportunities included in this report are germane to medical library personnel.

While the program titles found in the promotional materials were generally indicative of course content or subject matter, most were not meaningful when separated from other information provided in the announcement. In addition, it seemed not only meaningless, but misleading to report course titles developed for promotional purposes or to quantify such diverse elements. Therefore, the contents of each announcement was examined and a brief statement describing the subject matter covered was prepared.

Initially, the Library of Congress and Dewey Decimal Classification schemes were employed in an attempt to find a meaningful framework for organizing these subject matter descriptive statements. Because over 50 percent of the statements could not be classified using either system, and since over 80 percent of the opportunities could be classified using the organizing principle of the Handbook of Medical Library Practice[1], the descriptive statements are presented

using that classification scheme.

Nine general areas of medical librarianship were thus developed. These covered (1) the emergence of the modern medical library, (2) administration, (3) technical processing, (4) readers services, (5) automation, (6) audiovisual aids, (7) planning (facilities, furniture and equipment), (8) research and (9) the library and its (users). Further breakdown was necessary in the areas of administration, technical processing and readers services. A more thorough explanation of the classification system is given in Appendix B.

Findings

Information regarding 264 continuing education opportunities relevant to medical library personnel during the period September 1, 1973, to August 30, 1974, was received and is included in this report. This time period was selected because it was thought that by September 1, most organizations sponsoring such opportunities had been provided sufficient time to respond to the request for information. The number of continuing education opportunities in each subject matter category and their geographic location by National Library of Medicine region is shown in Table 2. The list of states within each region is given in Table 3.

The subject matter area in which the greatest number of opportunities exist is "Staffing" (45) followed by "Methods of Medical Reference Work" (34). No opportunities were available in "Identification of the Bibliographic Unit," "Rebinding," and "Circulation." The greatest number of opportunities are reported in Region 2 (New York and Northern New Jersey) and the fewest in Region 10 (Alaska, Idaho, Montana, Oregon, Washington).

TABLE 2

SUBJECT-CONTENT OF CONTINUING EDUCATION OPPORTUNITIES
BY NATIONAL LIBRARY OF MEDICINE REGION

Subject-Content	National Library of Medicine Region											
	1	2	3	4	5	6	7	8	9	10	11	Total
The Emergence of the Modern Medical Library	-	2	1	1	1	2	1	-	1	1	1	11
Administration												
General	-	-	-	1	2	-	1	2	-	-	1	7
The role of the library and its administrator in the institution	-	7	-	1	1	2	3	2	-	-	5	21
Planning	-	5	-	-	-	-	2	1	-	-	-	8
Organization	-	-	-	-	-	2	-	-	1	-	-	3
Staffing	1	6	-	2	3	6	7	4	7	-	9	45
Financial controls	1	2	-	3	-	2	2	-	3	-	-	13
Specifically for hospital libraries	-	1	-	-	-	1	1	-	4	-	9	16

TABLE 2 - (Cont.)

Subject-Content	National Library of Medicine Region											
	1	2	3	4	5	6	7	8	9	10	11	Total
Technical Processing												
Selection, acquisition and weeding	-	1	-	-	1	-	2	-	1	-	-	5
Cataloging and classification	-	-	-	-	1	-	-	1	-	-	-	2
Identification of the bibliographic unit	-	-	-	-	-	-	-	-	-	-	-	0
Serial literature	1	-	-	1	1	-	-	-	1	-	-	4
Preservation of material	2	-	1	-	2	1	-	-	2	-	2	11
Rebinding	-	-	-	-	-	-	-	-	-	-	-	0
Reader Services												
Reference (general)	-	-	-	-	1	-	-	-	-	-	5	6
Levels of reference service	-	1	-	-	-	-	-	-	-	-	-	1
Methods of medical reference work	1	7	2	1	1	1	10	2	9	-	-	34
Circulation; Document reproduction	-	-	-	-	-	-	-	-	-	-	-	0

TABLE 2 - (Cont.)

Subject-Content	National Library of Medicine Region											
	1	2	3	4	5	6	7	8	9	10	11	Total
Automation												
When to automate	2	3	1	3*	-	-	-	1	1	-	-	11
How to automate	-	3	-	8**	-	1	4	-	3	-	1	20
Automating specific services	-	1	-	10*	-	-	-	1	1	-	-	13
Audio-Visual Aids	2	10	1	2	-	3	2	3	1	-	3	27
Planning (Facilities, Furniture and Equipment	-	1	-	-	-	1	-	-	1	-	-	3
Research	-	1	-	-	-	-	-	-	-	-	-	1
Library and its Public	-	-	-	1	-	-	1	-	-	-	-	2
Totals	11	51	6	34	14	22	36	17	36	1	36	264

* One of the courses of the total was open to governmental librarians only
** Five of the courses of the total were open to governmental librarians only

TABLE 3

LIST OF STATES WITHIN EACH REGION

Region 1		
	Connecticut	New Hampshire
	Massachusetts	Rhode Island
	Maine	Vermont
Region 2		
	New York	11 Northern New Jersey counties
Region 3		
	Delaware	10 Southern New Jersey counties
	Philadelphia	
Region 4		
	District of Columbia	Virginia
	Maryland	West Virginia
	North Carolina	
Region 5		
	Kentucky	Michigan
	Ohio	
Region 6		
	Atlanta	South Carolina
	Florida	Tennessee
	Georgia	Puerto Rico
	Mississippi	
Region 7		
	Iowa	Minnesota
	Illinois	North Dakota
	Indiana	Wisconsin
Region 8		
	Colorado	South Dakota
	Kansas	Utah
	Missouri	Wyoming
	Nebraska	
Region 9		
	Arkansas	Oklahoma
	Louisiana	Texas
	New Mexico	
Region 10		
	Alaska	Oregon
	Idaho	Washington
	Montana	
Region 11		
	Arizona	Hawaii
	California	Nevada

TABLE 4

LENGTH OF CONTINUING EDUCATION OPPORTUNITIES

Type	Length	Number of Opportunities		Percent	
Degree courses open to non-degree students	1 semester or 1 quarter		30		100
Telelecture	less than 1 day	6		86	
	1 day	1	7	14	100
Short courses	less than 1 day	14		6	
	1 day	105		46	
	2 days	43		19	
	3 days	31		14	
	4 days	12		5	
	5 days	11		5	
	7 days to 1 month*	11	227	5	100
Total			264		...

* 3 x 7 days, 6 x 11-14 days, 2 x 1 month

Of the 264 courses offered, seven were by telelecture, 30 were graduate library school degree courses open to non-degree students and 227 were short courses, 155 were designed specifically for library personnel and 72 were designed for a more heterogeneous audience. Of the 155 designed specifically for library personnel, 12 were restricted to governmental employees only; the remaining 143 were open to all library personnel.

Table 4 summarizes the short courses by length. The most common length was one day (46%), followed by two and three day courses (19% and 14% respectively). Longer and shorter courses were equally distributed.

Tuition for these courses varied by length or number of days and is summarized in Table 5. Fees ranged from free to $395. One-day courses, the most commonly offered, ranged from $0.00 to $109.99, with a mean tuition of $19.05. The mode tuition for these 105 offerings was $25.00 - $29.99 differing upward from the mean due to 22 tuition free courses.

Tuition for courses of less than one day's duration averaged $4.00 with a range from $0.00 to $44.99, and mode of $0.00.

The mean tuition for two-day courses was $66.20, ranging from $0.00 to $355.00. The distribution of these fees was tri-model, with eight courses having no tuition, eight having tuition of $60.00 - $64.99, and eight having tuition of $95.99 - $99.99.

Courses of more than two days duration show tuition ranging from $75.00 to $395.00.

While the above data support the obvious premise that tuition fees for the shorter courses are less than for the longer ones, it is interesting to note that of the 227 courses with quoted tuition fees, 38, or 17%, were available without cost to the participant, providing at least some opportunity for free continuing education.

The sponsoring organizations were grouped according to affiliation: institutions of higher education, governmental agencies, professional associations and commercial organizations. Of the 264 courses offered, sponsorship was seen mostly in the institutions of higher education (103) with graduate library schools supplying the largest number (57). Associations offered a total of 74 courses; sponsorship by MIA represented 51 percent (38) of these.

TABLE 5

LENGTH OF COURSE BY FEE

Tuition Fee	Length of Course						
	Less than 1 day	1 day	2 days	3 days	4 days	5 days	7 days to 1 month
Free	8	22	8				
$ 1.00- 4.99	2	-	1				
5.00- 9.99	3	6					
10.00- 14.99	-	7					
15.00- 19.99	-	1					
20.00- 24.99	-	1					
25.00- 29.99	-	42	1				
30.00- 34.99	-	1					
35.00- 39.99	-	4					
40.00- 44.99	1	1					
45.00- 49.99		-	2				
50.00- 54.99		-	1				
55.00- 59.99		-					
60.00- 64.99		-	8				
65.00- 69.99		-					
70.00- 74.99		2					

TABLE 5 (Cont.)

LENGTH OF COURSE BY FEE

Tuition Fee	Length of Course						
	Less than 1 day	1 day	2 days	3 days	4 days	5 days	7 days to 1 month
$ 75.00- 79.99					2		
80.00- 84.99				1			
85.00- 89.99							
90.00- 94.99				3			
95.00- 99.99			8		2		
100.00-109.99		1			2		1
110.00-119.99			1				
120.00-129.99							
130.00-139.99							
140.00-149.99				3			
150.00-159.99				1			
160.00-169.99			1				
170.00-179.99			1	2			
180.00-189.99							
190.00-199.99							
200.00-209.99						2	

TABLE 5 (Cont.)

LENGTH OF COURSE BY FEE

Tuition Fee	Length of Course						
	Less than 1 day	1 day	2 days	3 days	4 days	5 days	7 days to 1 month
$230.00-239.99							1
240.00-249.99				12			
250.00-259.99						3	
270.00-279.99							1
350.00-359.99			1	2		2	
390.00-399.99				2			
Fee not given	-	17	10	5	6	4	8
Total	14	105	43	31	12	11	11
Average Cost	$ 4.00	19.05	66.20	165.00	51.00	242.00	

Governmental agencies offered a total of 62 courses; sponsorship of the regional medical libraries represented approximately half (33) of these. Sixteen courses were under the auspices of commercial organizations. Sponsorship was indeterminable for 9 courses. (Table 6)

Summary

The location, subject matter, cost, length, target population and type of sponsoring organization for 264 continuing education opportunities

TABLE 6

SPONSORING ORGANIZATIONS

Type	Number	Total	Percent
Associations			
MLA	38		
Other	36		
		74	28%
Governmental Agencies			
R.M.L.'s	33		
Other	29		
		62	23
Institution of Higher Education			
Graduate library schools	57		
Medical libraries	1		
Medical schools	1		
Other administrative units	44		
	—	103	39
Commercial Organizations	16	16	6
Sponsorship Unknown	9	9	4
Total		264	100%

of a collective nature for the period September 1, 1973 to August 30, 1974 have been reported in this chapter.

Because the data presented represent a cross section of the opportunities available, they are not noteworthy for determining specifically the extent to which the need for continuing education for medical library personnel is being met. They do however reflect some patterns in the supply of collective learning opportunities.

Collective learning activities were available in all NLM regions, however, the number of opportunities varied considerably by region from 1 in Region 10 to 51 in Region 2. While it appears that the number of opportunities is related to the number of libraries in the region and thus to the number of potential students, the data analyzed in this chapter does not conclusively support this conclusion.

The majority of opportunities (46%) were one day in length, followed by two and three day courses (19% and 14% respectively).

Tuition fees vary considerably ranging from $0.00 to $395.99, supporting the obvious conclusion that fees were lower for shorter courses, however 38 courses or 17% were tuition free suggesting that at least some opportunity exists for free participation.

The majority of the short courses (68%) were directed to library personnel while 32% were directed to a more heterogeneous audience.

The subject matter in which the most opportunities were offered was Administration, with Staffing showing the greatest number within this general category. Automation accounted for the next greatest number, followed by Readers Services and Audio-visual Aids. Fewer offerings were reported in Research and The Library and its Users.

A variety of organizations sponsored continuing education opportunities for medical library personnel. Professional associations, governmental agencies, institutions of higher education

and commercial organizations all provided collective learning opportunities.

Because many of the Regional Medical Libraries have extension programs to assist the various units in their area, further information was sought regarding the specific services offered in each region. In December, 1973 a letter (see Appendix C) was sent to the individual responsible in each of 11 RML's to determine whether the following services were being offered: 1) individual consultation in connection with grant applications, 2) individual consultation with hospital personnel responsible for the library, 3) workshops for individuals responsible for the library, 4) basic materials for use in establishing, organizing and administering a library, 5) whether RML personnel go to hospitals for consultation, and 6) whether individuals who request assistance must go to the RML.

The information from this survey is summarized by state rather than by NLM region because: 1) some regions are decentralized, thus services available among states within these regions vary, and 2) others had not been funded as of December, 1973.

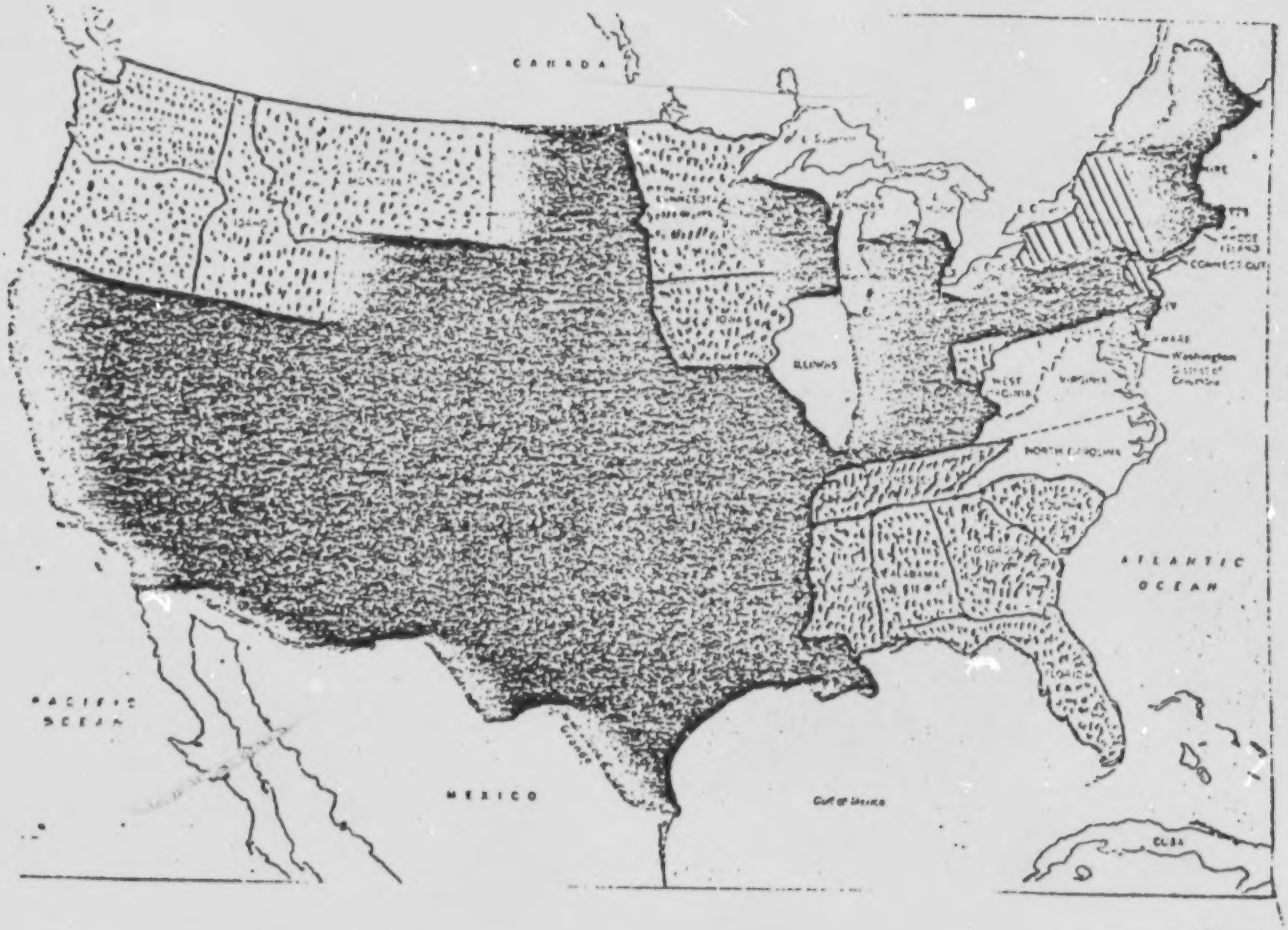
As of December, 1973 basic materials to aid in establishing and administering libraries were available in all states except New York, Northern New Jersey, Delaware, Maryland, Virginia, West Virginia, North Carolina, District of Columbia, Illinois, Northern Michigan and Ohio. The consistency of the materials

varied widely in content and in depth from state to state. In some instances only bibliographies were provided; in others packets of information developed specifically for the situation of the requesting library were provided.

The remainder of the information is summarized in Figure 1, and Table 7. In 13 and one quarter of the 50 states consulting services were available; in one and one-half states workshops were available, in 29 and three quarter states both consultation at the hospital library and workshops are available. Five and one-half states plus the District of Columbia provide neither service.

It must be remembered that the service offered by the regional medical libraries and resource libraries have changed in the period since the survey was undertaken (December, 1973).

FIGURE 1



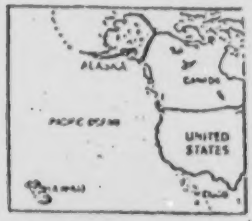
KEY

Provide consultations only.....

Provide workshops only.....

Provide consultations, workshops and go to the hospital.....

Provide none of the above---------- (no markings)



United States of America
The states of
Alaska and Hawaii

3/27/74

TABLE 7

SERVICES PROVIDED BY STATE

Provide consultations only: $13\frac{1}{4}$ states + Puerto Rico

Washington
Oregon
Montana
Idaho
Alaska
Minnesota
Iowa
Alabama
Florida
Georgia
Mississippi
Puerto Rico
South Carolina
Tennessee
$\frac{1}{4}$ Ohio

Provide workshops only: $1\frac{1}{2}$ states

New York
upper New Jersey

Provide consultations, workshops and go to the hospital: 29 3/4 states

Connecticut
Maine
Massachusetts
Vermont
New Hampshire
Rhode Island
Delaware
lower New Jersey
Pennsylvania
Indiana
North Dakota
Wisconsin
Colorado
Kansas
Missouri
Nebraska
South Dakota
Utah
Wyoming
Arkansas
Louisiana
New Mexico
Oklahoma
Texas
Arizona
California
Hawaii
Nevada
Kentucky
3/4 Ohio
$\frac{1}{2}$ Michigan

TABLE 7 (Cont.)

SERVICES PROVIDED BY STATE

No Basic Materials - 9½ + D.C.

New York
½ New Jersey
Delaware
Maryland
Virginia
North Carolina
West Virginia
District of Columbia
¼ Ohio
½ Michigan
Illinois

Provide none of the above: 6½ states including D.C.

Illinois
Maryland
North Carolina
Virginia
Washington D.C.
West Virginia
½ Michigan

APPENDIX A

MLA

MEDICAL LIBRARY ASSOCIATION, INC.

JULIE A. VIRGO, Director of Medical Library Education
Suite 3208
919 NORTH MICHIGAN AVENUE
CHICAGO, ILLINOIS 60611

May, 1973

Dear Colleague:

The Office of the Director of Medical Library Education at the Medical Library Association is establishing a clearinghouse for information on short courses, workshops, institutes, and other continuing education activities in general and medical librarianship.

We are requesting your assistance by asking that you let us know of any continuing education courses, workshops, insitutes, or programs on any aspects of either general or medical librarianship which you have developed or are planning to schedule. Would you please place us on your mailing list to receive notifications and descriptions of any future workshops, institutes, or any other programs that you offer? In addition, we would appreciate it if you could direct us to other sources of information.

Thank you very much for your help. We would be glad to answer any inquiries about continuing education activities that you may wish to direct to us.

Yours sincerely,

Julie A. Virgo

Julie A. Virgo
Director of Medical
Library Education
312-642-3757

APPENDIX B

CLASSIFICATION SCHEME USED FOR CATEGORIZING
SUBJECT CONTENT OF CONTINUING EDUCATION OPPORTUNITIES

Subject matter description statements supplied by promotional materials advertising continuing education opportunities were categorized according to their mention of the following subject criteria.

1. The Emergence of the Modern Medical Library
   - --Inter-library Cooperation
     - --Biomedical networking
     - --Consortium development and operation
   - --Extension librarianship
   - --New roles:
     - --in the institutions' continuing education and inservice training programs
     - --as a medical team member on patient rounds
     - --preparing packages of information for patient education
     - --participating in community health care projects.

2. Administration
   - -The role of the library and its administrator in the institution.
     - --Place of the library in a medical setting
     - --Medical education: implications for library service.
     - --Social responsibilities of medical librarians
     - --Hospital administration
   - -Planning
     - --Measurement and evaluation of library services
   - -Organization
     - --MEDLINE for library administrators
   - -Staffing
     - --Employee selection
     - --Staff development
     - --Dynamics of effective group work
     - --Leadership training
     - --Human relations training
   - -Financial controls
     - --Budget administration
     - --Grant applications and management

APPENDIX B (Cont.)

CLASSIFICATION SCHEME USED FOR CATEGORIZING
SUBJECT CONTENT OF CONTINUING EDUCATION OPPORTUNITIES

3. Technical Processing	
Part 1. Selection, Acquisition and Weeding	--Collection development --Acquisitions --Weeding
Part 2. Cataloging and Classification	--Descriptive cataloging --Subject classification
- Identification of bibliographic unit	--Bibliographic verification
- Serial Literature	--Serials
Part 3. Preservation of Library Materials	--Book preservation
- Rebinding	--Binding
4. Readers' Services	
Part 1. Reference - Levels of Reference Service	--Reference Services
- Methods of Medical Reference Work	--Reference Tools --Medical terminology --Abstracting and Indexing --History of Medicine Literature --Pharmacy literature --Nursing literature --Environmental literature --Dental literature
	--MEDLINE for health sciences librarians
	--Selective Dissemination of Information
Part 2. Circulation; Document Reproduction	--Circulation techniques and procedures
	--Inter-library loan
5. Automation in Medical Libraries When . . . How . . .	--Systems analysis

APPENDIX B (Cont.)

CLASSIFICATION SCHEME USED FOR CATEGORIZING
SUBJECT CONTENT OF CONTINUING EDUCATION OPPORTUNITIES

- Library Services for which Automation has been Successfully used.	--Library Automation-acquisitions
	--Library Automation-cataloging
	--Library Automation-serials
	--Library Automation-circulation
	--Computerized information systems
6. Audiovisual Materials	--A-V services
	--A-V materials-selection
	--A-V materials-processing and storage
	--A-V materials-production
7. Research	
8. Rare Books, Archives, and the History of Medicine	--Rare Books
	--Archives
	--History of Medicine
9. Library Planning, Furniture and Equipment	--Library planning-building
	--Library planning-remodeling
	--Library planning-space allocation and equipment
10. The Library and Its Public: Identification and Communication	--Public Relations
	--Biomedical Communication

Medical Library Association, Inc. Suite 3208, 919 North Michigan Avenue, Chicago, Illinois 60611 312/266-2456

APPENDIX C

Mailed to all Regional and Resource Medical Libraries

From time to time the Medical Library Association receives requests from hospital personnel for assistance in establishing or improving a hospital library's collection and service. What they are requesting is very basic information; the service they require is often that of consultation.

While many of the Regional Medical Libraries have extension programs which provide consultation services, workshops, etc. we have no record of the types of service available in each region. It would be useful to use in referring inquirers to know exactly what services are available from each RML.

Could you let me know if you provide the following services.

_____individual consultations in connection with grant applications;

_____individual consultations with hospital administrators, secretaries, medical records personnel, etc. who have been assigned responsibility for the library and who need help;

_____workshops or institutes for people responsible for the library; How often?

Where are these located?

_____basic materials to aid in establishing, organizing or running a library;

Please specify bibliographic information and prices.

Do you go to the hospital? Yes_____ No_____

Do individuals have to come to the RML? Yes_____ No_____

Other services (please specify).

Specifically, to whom should we direct inquirers in your library (position, title)?

Enclosed please find two copies of this questionnaire. One is for your files, and the other can be returned to the Medical Library Association at the above address.

Thank you for your help. The information you send will enable us to more appropriately refer inquirers to you.

Yours sincerely,

Julie A. Virgo
Director of Education
Telephone: 312/266-2456

JAV/pf
encl.

CHAPTER V

ORGANIZATIONAL SUPPORTS FOR CONTINUING EDUCATION

The literature of various professional groups suggests that practitioners' actual involvement in life long learning is profoundly influenced by at least three dimensions of their work environment: 1) superiors' attitude toward continuing education, 2) organizational policies regarding continuing education, and 3) the presence of on-the-job problem situations or challenges (1-3). Thus, before developing a plan for continuing education for medical library personnel, it seemed prudent to determine the extent to which their work environment supported or constrained their involvement.

The purpose of this chapter is to describe this phase of the investigation. A description of the method of data collection and analysis is followed by a discussion of the findings. The final section of this chapter includes a summary and conclusions.

Methodology

A simple random sample of 289 individuals was drawn from the roster of 2400 personal and 600 institutional members of the Medical Library Association. The sample size was calculated to yield a .95 confidence interval. Stratification by type of library, size of library, or position held was not possible, because at the time of this investigation this type of information was not included in the MLA files.

A questionnaire was designed to assess the organizational supports for and constraints against continuous learning as perceived by individual medical library personnel. In addition to questions about the type and size of library, and position in the formal organization structure, the questionnaire requested information regarding the respondent's perception of his/her immediate superior's behavior in creating or locating opportunities for continuing education, in assisting in the identification of continuing education needs, and in encouraging participation in professional meetings. Information regarding organizational policies affecting financial support for continuing education and for determining whether on-the-job challenge was present was also requested. The final question (number 10) was included in an attempt to ascertain the type of learning experience the respondent found most meaningful. A copy of the questionnaire along with the covering letter may be found in Appendix A at the end of this chapter.

On July 11, 1974, 289 questionnaires were mailed of which 154 or 53 percent were returned. A second mailing to the 135 individuals whose questionnaires had not been returned was made on August 13 and increased the response rate to 74 percent. On October 1, those individuals within the continental United States and Canada were contacted by phone and urged to respond. As a result of this follow-up, 11 additional questionnaires were returned. Altogether 230 responses were received giving a response rate of 80 percent.

An analysis of the 59 non-responses indicated that 10 (17 percent) had mailing addresses out of the country, and 8 (14 percent) were retired or not employed in a medical library. The remaining 41 (70 percent) of the non-respondents could not be categorized. Thus, it seems fair to assume that the non-respondents did not bias the sample with regard to MLA members living within the continental limits of the United States and Canada.

Of the 230 responses received 17 were considered invalid, 1 because the addressee was deceased, 5 each because the addressee had changed place of employment and a new address was not available. Thus it was concluded that the 213 questionnaires included in the following analysis represent an unbiased sample of the employed members of the Medical Library Association living within the continental limits of the United States and Canada.

Data Analysis

Questions 1 through 4 of the "Survey of Organizational Inducements" were developed to elicit information that might allow for categorization of the responses to questions 5 through 10.

Table 1 summarizes the response to item, "Type of Library - check only 1."

The largest number of respondents (35 percent) were employed in hospital libraries, followed by medical center and medical school libraries, 21 and 13 percent respectively. Twenty-three percent of the respondents checked "other," while 8 percent were distributed over the other five categories.

TABLE 1

NUMBER OF RESPONSES BY TYPE OF LIBRARY

Type of Library	Number Responding N=213	Percent Responding %=100
Medical Center	45	21.13
Medical School	27	12.68
Dental School	2	.93
Nursing School	5	2.35
Pharmacy School	2	.93
Hospital	75	35.21
Medical Society	3	1.41
Commercial Firm	5	2.35
Other	49	23.01

Because the second greatest number of responses was in the "other" category, further analysis of these 49 questionnaires was performed. This examination revealed that 2 respondents specified chiropractic school, 1 specified veterinary school, 11 specified a variety of multiple user schools such as nursing, dentistry, pharmacy, 5 specified university and 11 specified government. The remaining 19 defied categorization. This analysis suggests that the forced choices utilized in this questionnaire are not discrete categories nor do they reflect the respondents' perceptions of type of library.

TABLE 2

NUMBER OF RESPONSES BY RECLASSIFIED TYPE OF LIBRARY

Type of Library	Number Responding N=213	Percent Responding %=100
Medical Center	45	21.13
Medical School	27	12.68
Single-User Group Schools	12	5.63
Multi-User Group Schools	11	5.16
Hospital	75	35.21
Government	11	5.16
Commercial Firm	5	2.35
University	5	2.35
Other	22	10.33

In an effort to group responses in a more meaningful way, the 2 chiropractic school and the one veterinary school libraries were combined with the nursing, dental and pharmacy school libraries to form a new category, Single-User Group Schools. The 11 libraries associated with multi-user groups formed a new category Multi-User Group Schools. The 11 government libraries became a new category as did the 5 university libraries. The 3 medical society libraries were combined with the 19 libraries that remained uncategorized to form the classification "Other." Table 2 depicts the new "Type of Library" classification, the one to used in this analysis.

Questions 2 and 3 were designed to obtain information regarding the respondent's position in the formal authority structure of the employing organization, based on the assumption that the higher the level, the greater his possible influence on policy regarding continuing education. It was hoped that responses to question 2 would provide comparable data and that answers to question 3 would serve to verify the validity of the responses to question 2.

Of the 213 responses included in this analysis, 16 did not answer questions 2 and 3, 28 clearly misunderstood the instructions for question 2, and 12 probably misunderstood the instructions. Because 56 or 26.29 percent of the responses were considered invalid this information was not analyzed further.

Question 4 asked for the number of current journal titles to which the respondent's institution subscribed. Table 3 summarizes the responses to this question.

One hundred eighteen or 57.84 percent of the 204 respondents to this question are employed in libraries subscribing to under 500 current journal titles. Fifteen or 7.35 percent are employed in libraries subscribing to from 500 to 999 titles, 23 or 11.27 percent are employed in libraries subscribing to from 1,000 to 1,999 titles, 26 or 12.74 percent in libraries of from 2,000 to 2,999 titles, 10 or 4.90 percent in libraries from 3,000 to 3,999 titles and 2.95 percent in libraries from 4,000 to 4,999 or over 5,000 titles.

The number of current journal titles to which the respondents' library subscribes displayed by type of library comprises Table 4.

TABLE 3

NUMBER OF RESPONSES BY NUMBER OF CURRENT JOURNAL TITLES TO WHICH INSTITUTION SUBSCRIBES

Number of Current Journal Titles	Number Responding N=213	Percent Responding %=100
Less than 100	22	10.33
100-199	55	25.82
200-299	17	7.98
300-399	16	7.51
400-499	8	3.76
500-999	15	7.04
1000-1499	11	5.16
1500-1999	12	5.63
2000-2499	10	4.69
2500-2999	16	7.51
3000-3499	7	3.29
3500-3999	3	1.41
4000-4999	6	2.82
Over 5000	6	2.82
No answer	9	4.23

The majority of the hospital libraries, those serving one user group and those categorized as other, subscribe to less than 500 current journals: 97.33 percent, 83.33 percent and 68.18 percent respectively. Over one-half of the libraries serving schools of multi-users (63.63 percent) and medical centers (57.77 percent) subscribe to from 1,000 to 2,999 current journals, while 48.14

TABLE 4

NUMBER OF CURRENT JOURNAL TITLES BY TYPE OF LIBRARY

Type of Library	Number of Current Journal Titles															
	Less than 100	100 to 199	200 to 299	300 to 399	400 to 499	500 to 999	1000 to 1499	1500 to 1999	2000 to 2499	2500 to 2999	3000 to 3499	3500 to 3999	4000 to 4999	Over 5000	NA	TOTAL N=213
Medical Center	0	5	2	1	1	2	5	8	3	8	4	1	2	2	1	45
Medical School	1	1	0	1	1	3	5	4	2	2	2	1	1	0	3	27
Single-User Group Schools	4	3	1	1	1	1	0	0	0	1	0	0	0	0	0	12
Multi-User Group School	0	1	0	0	0	0	1	0	3	3	0	0	2	0	1	11
University	0	0	0	0	1	0	0	0	0	1	0	1	1	1	0	5
Hospital	13	38	11	11	0	1	0	0	0	0	0	0	0	0	1	75
Government	0	1	1	0	2	4	0	0	2	0	0	0	0	1	0	11
Commercial Firms	0	0	0	0	1	2	0	0	0	0	0	0	0	0	2	5
Other	4	6	2	2	1	2	0	0	0	1	1	0	0	2	1	22
TOTAL	22	55	17	16	8	15	11	12	10	16	7	3	6	6	9	213

percent of the medical school libraries report subscriptions within this range.

In an effort to ascertain whether different types of libraries or different sizes of libraries as measured by the number of current journal subscriptions provide significantly different levels of support for continuing education, the responses to questions 5 through 8 were weighted and a mean score was derived for each type and for each size. An analysis of variance was then computed. No significant difference in support for continuing professional education as measured by this instrument was found either by type of library ($F=5.20$) or by size of library ($F=4.85$). Therefore the responses to the items in the questionnaire will be reported across both type and size.

Item 5 in the questionnaire requested the respondent's perceptions of his immediate superior's behavior regarding continuing education opportunities. Table 5 summarizes the responses to this question.

Of the 199 who answered this question, the majority report that their immediate superior encourages them to take advantage of existing services and activities, nevertheless 18 percent of these 199 report that their immediate superior shows little interest in their continuing education.

Table 6 summarizes the responses to question 6, "Check the one statement below which best describes your immediate superior's behavior regarding the definition of your continuing professional education needs."

TABLE 5

RESPONSES TO ITEM 5, "CHECK THE ONE STATEMENT BELOW WHICH BEST DESCRIBES YOUR IMMEDIATE SUPERIOR'S BEHAVIOR REGARDING YOUR CONTINUING PROFESSIONAL EDUCATION."

Response	Number Responding N=213	Percent Responding %=100
Tries to create new opportunities for my c.e.	14	6.57
Encourages me to take advantage of existing c.e. activities and resources	114	53.52
If I express my interest in c.e., assists me in locating resources and activities	35	16.43
Shows little interest in my c.e. activities	36	16.91
No answer	14	6.57

TABLE 6

RESPONSES TO ITEM 6, "CHECK THE ONE STATEMENT BELOW WHICH BEST DESCRIBES YOUR IMMEDIATE SUPERIOR'S BEHAVIOR REGARDING THE DEFINITION OF YOUR CONTINUING PROFESSIONAL EDUCATION NEEDS."

Response	Number Responding N=213	Percent Responding %=100
Works with me to assist in defining my c.e. needs	32	15.02
Accepts my decisions with regard to my c.e. needs	151	70.89
Shows little interest in my c.e. needs	23	10.80
No answer	7	3.29

The majority of respondents perceive their immediate superior as accepting their (the respondent's) decision about the definition of continuing education needs. A small minority, 11 percent report that their immediate superior shows little interest in their need for continuing education.

Responses to parts A., B., and C. of question 8 relating to organizational fiscal policies regarding continuing professional education are summarized in Table 7. The majority of libraries provide fiscal support for continuing education. Although a relatively small percentage of the respondents answer no to these questions, it was assumed that those answering "no" to two or more would feel constrained in participating in continuing professional

TABLE 7

RESPONSES TO QUESTIONS 8A, B,AND C, ORGANIZATIONAL FISCAL POLICIES REGARDING CONTINUING PROFESSIONAL EDUCATION

Item	Number of Responses			Percentage of Responses		
	Yes	No	NA	Yes	No	NA
Does your organization: A. Have a tuition reimbursement policy for which you qualify?	116	80	17	54.46	37.56	7.89
B. Pay all or a part of your travel expenses to take advantage of continuing education activities?	156	48	9	73.23	22.54	4.23
C. Give you paid time-off to attend continuing education activities?	181	23	9	84.97	10.80	4.23

education activities of a collective nature, thus a further analysis of the "no" answers was conducted.

Table 8 summarizes the responses of those individuals answering "no" to 2 of the 3 questions regarding organizational fiscal support for continuing education. Twelve respondents or 6 percent perceive a total lack of financial support from their place of employment for continuing education as measured by the instrument used in this investigation. Thirty-five or 16 percent receive only two of the three types of financial assistance listed in the questionnaire (tuition reimbursement, travel expenses, paid time-off).

Item 7 asked the question, "How does your immediate superior

TABLE 8

RESPONSES OF INDIVIDUALS ANSWERING "NO" TO TWO OR MORE QUESTIONS REGARDING ORGANIZATIONAL FINANCIAL SUPPORT OF CONTINUING PROFESSIONAL EDUCATION

Organization Does Not	Number Responding N=35	Percentage of Total Response(213)
Have tuition reimbursement policy or reimburse for any or part of travel expenses for continuing education	14	6.47
Have tuition reimbursement policy or give paid time-off to attend continuing education	5	2.34
Reimburse for travel expenses or give paid time-off to attend continuing education	4	1.87
Have tuition reimbursement policy, reimburse for any or part of travel expenses, or give paid time-off for continuing education	12	5.63

behave about your participation in professional meetings?." Table 9 summarizes the responses to this question. The vast majority of the respondents, 89 percent, perceive their immediate superior as either very encouraging or somewhat encouraging regarding their participation in professional meetings.

If the respondents' superiors encourage participation in professional society meetings, does the employing organization contribute financial support for this activity? Items 8 D and E of the survey instrument sought answers to this question by

TABLE 9

RESPONSES TO ITEM 7, "HOW DOES YOUR IMMEDIATE SUPERIOR BEHAVE ABOUT YOUR PARTICIPATION IN PROFESSIONAL MEETINGS?"

Response	Number Responding N=213	Percent Responding %=100
Very encouraging	121	56.81
Somewhat encouraging	68	31.92
Not encouraging at all	12	5.63
Discouraging	4	1.88
No answer	8	3.76

asking whether travel expenses are paid to professional meetings and whether paid time-off is allowed. Table 10 summarizes these responses. Clearly organizational financial support for participation in professional meetings as measured by the instrument used in this study is congruent with superiors' behavior regarding participation, indicating that for the majority of the respondents the work environment encourages this type of activity.

In addition to participation in courses and professional meetings, the presence or absence of a formalized staff development or in-service training program could fulfill some of the continuing education needs of medical library personnel, thus item 8F, "Does your organization have a staff development or in-service training program for which you are eligible?" was included in the

TABLE 10

RESPONSES TO QUESTIONS 8D AND 8E ORGANIZATIONAL FINANCIAL POLICIES REGARDING PARTICIPATION IN PROFESSIONAL MEETINGS

Item	Number of Responses			Percentage of Responses		
	Yes	No	NA	Yes	No	NA
Does your organization pay all or part of your travel expenses to attend professional meetings?	173	30	10	81.22	14.09	4.69
Does your organization give you paid time-off to attend professional meetings?	191	15	7	89.67	7.04	3.29

questionnaire. Table 11 displays the responses to this item. The majority of employing organizations, 59 percent, do not have staff development or in-service training programs for which medical library personnel are eligible. This may be explained in part by the fact that many of the employing libraries were small in staff size.

Item 9 requested the respondents to estimate the number of times they had participated in five types of continuing education activities in the last year. Respondents interpreted the type of estimate in a variety of ways, as might have been expected, thus 62 percent of the responses are not comparable. Therefore data derived from this item is not analyzed further.

TABLE 11

RESPONSES TO QUESTION 8F, " DOES YOUR ORGANIZATION HAVE A STAFF DEVELOPMENT OR IN-SERVICE TRAINING PROGRAM FOR WHICH YOU ARE ELIGIBLE?"

Response	Number Responding N=213	Percent Responding %=100
Yes	72	33.80
No	125	58.69
No answer	16	7.51

Item 10 asked the respondents to briefly describe the most meaningful professional learning experience of any kind they had had in the last year. Examples of various types of learning experiences, i.e., an on-the-job challenge or problem solving experience, a professional meeting, a discussion with a colleague, an individually planned or group learning experience, were stated. It was hoped that by categorizing the descriptions, some inference might be made as to the type of experience medical library personnel perceive as most instrumental in their continuing education. Two members of the project staff read the descriptions and reached agreement on the categorizations as summarized in Table 12.

An on-the-job challenge or problem solving encounter was described as the most meaningful professional learning experience of the last year by 31.45 percent of the respondents (more than twice the number choosing any other response). The second most often described experience was courses or seminars taken for credit from an institution of higher education

TABLE 12

RESPONSES TO ITEM 10, "BRIEFLY DESCRIBE THE MOST MEANINGFUL PROFESSIONAL LEARNING EXPERIENCE...YOU HAVE HAD IN THE LAST YEAR." BY CATEGORY OF RESPONSE

Response Category	Number Responding N=213	Percent Responding %=100
On-the-job challenge or problem solving experience	67	31.45
Professional meeting	23	10.80
Discussion with colleague	15	7.04
[1]Individual learning experience	29	13.62
[2]Group learning experience	33	15.49
[3]Group learning experience	23	10.80
No answer	23	10.80

[1]Includes writing papers or articles, preparation and teaching a credit course, developing a workshop or c.e. course, planning and pursuing a sequence of activities for self-instruction.

[2]Includes attending classes, seminars, practicum for higher education credit.

[3]Includes attending classes, seminars, discussion groups, practicum not for credit.

---

followed by individually planned learning sequences, 15.49 percent and 13.62 percent respectively. Professional meetings and not-for-credit group learning experiences each with a 10.80 response rate ranked fourth and a discussion with a colleague ranked fifth with a 7.04 response rate.

While the instrument used in this phase of the investigation was not designed to explain the respondents' choices an interesting question arises: Why did short, not-for-credit courses, those usually thought to be synonymous with continuing professional education, rate beneath three other types of continuing education opportunities? In an effort to at least ascertain whether the respondents had attended short, not-for-credit courses, answers to question 9 were carefully scrutinized. Eighty-two percent of the respondents indicated that they had participated in such an activity which does not explain the low ranking. Other possible explanations are that medical librarians actually prefer continuing education through practical experience, an assumption common in other areas of adult education or that they find something lacking in the short not-for-credit courses they attended.

Summary

A ten-item questionnaire designed to assess the extent to which the work environment supports or constrains medical library personnel in participating in continuing education activities was mailed to a random sample of 289 of the 3,000 members of the Medical Library Association. As a result of the mailing and two follow-ups on 80 percent response rate was obtained. An analysis of non-respondents indicated that the responses constitute an unbiased sample of those members of the Medical Library Association employed in medical library work within the continental United States and Canada.

The employing organizations of the membership of the Medical Library Association support continuing education at a relatively high level. While only seven percent of the respondents perceived that their immediate superior tried to create new opportunities for their continuing education, 54 percent felt that their immediate superior encouraged taking advantage of existing activities and resources. Similarly, only 15 percent reported that their immediate superior worked with them in defining educational needs, however 71 percent perceived that their immediate superior accepted their decisions regarding continuing education needs. While these responses regarding superiors' behavior in support of continuing education are heartening, it must be emphasized that a small, but significant number, 18 and 11 percent respectively, indicated that their immediate superiors showed little interest in the respondents' continuing education activities or needs.

In addition to supportive behavior on the part of superiors, employing organizations provide a relatively high level of financial support for employees' continuing education. Fifty-four percent have tuition reimbursement policies, 73 percent pay all or part of the travel expenses incurred for continuing education and 85 percent give paid time off to attend continuing education activities. Nevertheless, 6 percent provide none of these financial supports, while 11 percent provide only one, indicating that approximately 17 percent of the members of the Medical Library Association experience financial constraints to taking advantage of continuing education activities.

Fifty-nine percent of the members work for organizations that do not have in-service training or staff development programs for which they are eligible indicating that the provision of continuing education within the employing libraries is at best informal and probably marked by a lack of systematic planning.

Work environment support for participation in professional meetings appears to be slightly greater than support for continuing education per se. Fifty-seven percent of the MLA membership perceive their immediate superior as very encouraging in this area and 32 percent feel their immediate superior is somewhat encouraging. Financial support for attendance at professional meetings is also slightly greater: 8 percent higher than for participation in continuing education.

An attempt to discover the extent to which the work environment of medical library personnel provides challenges and/or problem-solving opportunities generated such variable data that analysis was not possible.

When asked to describe their most meaningful professional learning experience in the last year, more (31 percent) reported an on-the-job problem solving experience than any other type. Not-for-credit short courses, often considered synonymous with continuing education, ranked a close fourth to the second and third choices.

The results obtained from this study agree with those obtained in a study of college and university library policies on staff development (4).

FOOTNOTES

1. Renck, R., Kahn, E. L., and Gardner, B. B., Continuing Education for R & D. Careers, National Science Foundation 69-20, 1969.

2. Campbell, J. P. and Beatty, E. E., Paper presented at American Psychological Association Meeting, Washington D.C., 1971.

3. Dubin, S. S. and Marlow, H. L., A Survey of Continuing Professional Education for Engineers in Pennsylvania, Department of Planning Studies. The Pennsylvania State University, University Park, PA., 1965.

4. Breiting, A., Dorey, M., and Sockbeson, D. Staff development in college and university libraries. Special Libraries 67: 305-10 (july) 1976.

Medical Library Association, Inc. Suite 3208, 919 North Michigan Avenue, Chicago, Illinois 60611 312/266-2456

APPENDIX A

SURVEY OF ORGANIZATIONAL INDUCEMENTS
TO CONTINUING EDUCATION

July 11, 1974

Dear Member:

We are making a study under a grant from the National Library of Medicine to determine the continuing education needs of Health Sciences Librarians. Your name has been selected at random from our membership files to assist in one phase of the study by completing the enclosed questionnaire.

The questionnaire has two purposes:

1. To assess your perceptions of the climate in your place of employment that influence your participation in continuing education activities;

2. To document your perceptions of the subject matter you feel are important to your performance as a health sciences librarian.

Your response will remain strictly confidential, so please feel free to complete the questionnaire according to your perceptions of your work situation.

Because the survey is being sent to a sample of 300 MIA members, and not to the entire membership, your individual response is extremely important to the success of the study and to the continuing education program that will ensue.

Please complete the questionnaire and mail it in the enclosed envelope to:

Division of Education
Medical Library Association
919 North Michigan Avenue, Suite 3208
Chicago, Illinois 60611

Thank you for your assistance.

Yours sincerely,

Julie A. Virgo

Julie A. Virgo
Director of Education

JAV/pf
encl.

Medical Library Association, Inc. Suite 3208, 919 North Michigan Avenue, Chicago, Illinois 60611 312/266-2456

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SURVEY OF ORGANIZATIONAL INDUCEMENTS

TO

CONTINUING EDUCATION

If the information on the label is incorrect, please enter corrections below.

_____

_____

_____

_____

1. Type of library - check only 1

____Medical Center	____Hospital
____Medical School	____Medical Society
____Dental School	____Commercial Firm
____Nursing School	____Other, please specify
____Pharmacy School	_____

Please try to answer questions 2, 3, and 4. If you do not have access to information to allow you to answer, please proceed to question 5.

2. Your level in the formal organization structure. Organization refers to the box you checked in question 1.

   If you can picture a chain of responsibility between yourself and the number 1 person (president of medical center or hospital administrator) how many people are in the chain, including yourself?

   Number of people in the chain_____.

3. Your title _____.

   Your immediate superior's title _____.

   The title of the individual to whom your immediate superior reports _____.

4. Number of current journal titles to which your institution subscribes _____.

For the purposes of answering questions 5 through 10, would you please read the following definitions of Continuing Professional Education and Professional Meetings.

* Continuing professional education - an activity designed to change professionally related knowledge, attitudes or skills. It may be an activity engaged in on an individual basis such as reading journals or taking a correspondence course; it may be tutorial, on-the-job training or participation in a group learning experience such as a short course or a discussion group; or it may be a not-for-credit course given by a college or university.
* Professional meetings - meetings with colleagues (librarians or others) which are deemed necessary for the advancement of the profession or the employing organization but not aimed specifically at changing knowledge, attitudes or skills.

---

5. Check the one statement below which best describes your immediate superior's behavior regarding your continuing professional education.

   _____Tries to create new opportunities for my continuing education.

   _____Encourages me to take advantage of existing continuing education activities and resources.

   _____If I express my interest in continuing education, assists me in locating resources and/or activities.

   _____Shows little interest in my continuing education activities.

6. Check the one statement below which best describes your immediate superior's behavior regarding the definition of your continuing professional education needs.

_____Works with me to assist in defining my continuing education needs.

_____Accepts my decisions with regard to my continuing education needs.

_____Shows little interest in my continuing education needs.

7. How does your immediate superior behave about your participation in professional meetings?

_____Very encouraging

_____Somewhat encouraging

_____Not encouraging at all

_____Discouraging

8. Does your organization:

	Yes	No
A. Have a tuition reimbursement policy for which you qualify?	____	____
B. Pay all or part of your travel expenses to take advantage of continuing education activities?	____	____
C. Give you paid time-off to attend continuing education activities?	____	____
D. Pay all or part of your travel expenses to professional meetings?	____	____
E. Give you paid time-off to attend professional meetings?	____	____
F. Have a staff development or in-service training program for which you are eligible?	____	____

9. Attempt to estimate the number of times you participated in each of the following Continuing Professional Education activities in the last year.

_____ An on-the-job challenge or problem solving experience

_____ An exchange of information about a library problem or new technique with a colleague in another library

_____ A learning experience you planned for yourself

_____ A short course, workshop, seminar or institute

_____ A for-credit course sponsored by an educational institution

10. Briefly describe the most meaningful professional learning experience of any kind you have had in the last year. It may have been an on-the-job challenge or problem solving experience, a professional meeting, a discussion with a colleague or it may relate to an individual or group learning experience. Please try to be as specific as possible.

_____

_____

_____

_____

_____

11. We need to know which areas of medical library practice you would like to see included in our continuing education program. Which of the courses on the following page (check up to ten) would you be interested in attending within the next three years?

_____Reference tools
_____Reference services
_____Nursing literature
_____Pharmacy literature
_____Dental literature
_____Environmental literature
_____History of medicine literature
_____Selective dissemination of information
_____Abstracting and indexing
_____Inter-library loan
_____Bibliographic verification
_____Computerized information retrieval systems
_____MEDLINE for health sciences librarians
_____MEDLINE for library administration
_____Descriptive cataloging
_____Subject classification
_____Serials
_____Binding
_____Circulation techniques and procedures
_____Acquisitions
_____Collection development
_____Weeding
_____Archives
_____Rare books
_____Book preservation
_____History of Medicine
_____Place of the library in a medical setting
_____Consortium development and operation
_____Extension librarianship
_____Biomedical networking
_____Biomedical communication
_____A-V materials - selection
_____A-V materials - production
_____A-V materials - processing and storage
_____A-V services
_____Medical terminology
_____Systems analysis
_____Library automation - circulation systems
_____Library automation - serials
_____Library automation - acquisitions
_____Library automation - cataloging
_____Budget administration
_____Measurement & evaluation of library services
_____Hospital administration
_____Library planning - building
_____Library planning - space allocation and equipment
_____Library planning - remodelling
_____Grant applications and management
_____Inter-library cooperation
_____Public relations
_____Employee selection
_____Staff development
_____Leadership training
_____Dynamics of effective group work
_____Human relations training
_____Social responsibilities of medical librarians
_____Medical education: implications for library service

New roles for the librarian in the following situations:

_____In the institution's continuing education and inservice training programs
_____As a medical team member on patient rounds
_____Preparing packages of information for patient education
_____Participating in community health care projects
_____Other new roles: (please specify)_____

_____

Please return your completed questionnaire in the enclosed self-addressed envelope to:

Division of Education
Medical Library Association
919 North Michigan Avenue, Suite 3208
Chicago, Illinois 60611

Thank you!

CHAPTER VI

CONTINUING EDUCATION PROGRAMS OF OTHER ASSOCIATIONS AND PROFESSIONS

In reviewing the continuing education literature of other associations and professions it became apparent that much of what was actually being done was not described in the published literature. Therefore, it was decided to survey professional associations encompassing a broad range of occupations to obtain information about their current continuing education activities and on the extent of their programs, methods of program support, types of program delivery mechanisms and level of audiences served. (See Appendix A at the end of this chapter for a copy of the survey questionnaire.)

As a result of a literature review (see Working Paper No. 1), certain fields were identified in which continuing education programs were in progress. These fields were placed in five main groups:

1. health professions
2. non-health professions
3. national library associations
4. state, regional, territorial and provincial library associations
5. state and territory library agencies

(See Appendix B for a listing of associations within each field.)

The non-library professional associations (1 and 2) surveyed were selected from the Encyclopedia of Associations (1) on the basis of our own knowledge that the general field was concerned with the availability of continuing education opportunities for its members.

The library associations (3, 4, and 5) were selected from

the association listings in the 1973 Bowker Annual (2). All national professional library associations listed there were included except those dealing solely with school or childrens' libraries. All state, regional, provincial and territorial library associations were surveyed, as were all state and territory library agencies.

A total of 353 associations were thus identified and questionnaires were sent to them in August, 1973. Twelve of these were returned by the post office as non-forwardable. A total of 265 associations responded giving an overall response rate of 78%. Of the 265 responses, 29 were letters or printed materials not completed questionnaires; they were, therefore, not included in the analysis. Of these 29, 8 reported some type of continuing education program. Results as reported here reflect the remaining 236 completed questionnaire responses only.

Of these 236 associations, 150 (64 percent) reported sponsorship of some type of continuing education program for their membership. As can be seen from Table 1, the non-library associations reported a higher percentage of continuing education programs for their members than did library associations. This, however, was to be expected as the non-library survey groups had been chosen to cover associations in fields known to be involved in continuing education. The 67 percent program sponsorship by the library agencies is believed to reflect state funding available at that time for continuing education. The lowest percentage reported overall was the sponsorship of continuing education by only

TABLE 1

ASSOCIATIONS SPONSORING CONTINUING EDUCATION PROGRAMS FOR THEIR MEMBERS

Type of Association	Percentage Reporting Sponsorship of Continuing Education Programs for their Members	N
Health Professions	71% (57)	80
Non-Health Professions	77 (46)	60
National Library Associations	46 (13)	28
State Library Associations	37 (14)	38
State Library Agencies	67 (20)	30
All Groups	64% (150)	236

37 percent of the state library associations.

Of the 86 organizations reporting no current continuing education program, 21 (24 percent) indicated plans to sponsor programs within the next two years (See Table 2).

TABLE 2

ASSOCIATIONS NOT CURRENTLY OFFERING CONTINUING EDUCATION PROGRAMS FOR THEIR MEMBERS BUT INDICATING PLANS TO DO SO WITHIN THE NEXT TWO YEARS

Type of Association	Percentage Planning to Sponsor Programs	N
Health Professions	26% (6)	23
Non-Health Professions	36 (5)	14
National Library Associations	13 (2)	15
State Library Associations	25 (6)	24
State Library Agencies	20 (2)	10
All Groups	24%	86

Of even greater interest is the breakdown of the reasons given for not offering a continuing education program. (See Table 3) Absence of program development capability (20 percent) and budgetary constraints (28 percent) represent the primary reasons given. Only

TABLE 3

REASONS FOR NOT SPONSORING CONTINUING EDUCATION PROGRAMS FOR MEMBERS*

Type of Association	Percentage Responding							N
	Lack of Member Interest	Incompatibility with Goals of Association	Absence of Program Development Capability	Absence of Marketing Capability	Budgetary Constraint	Other	No Response	
Health Professions	0% (0)	35% (8)	4% (1)	0% (0)	13% (3)	17% (4)	30% (7)	23
Non-Health Professions	7 (1)	21 (3)	7 (1)	0 (0)	21 (3)	14 (2)	36 (5)	14
National Library Associations	13 (2)	7 (1)	40 (6)	13 (2)	33 (5)	20 (3)	33 (5)	15
State Library Associations	4 (1)	8 (2)	25 (6)	0 (0)	46 (11)	17 (4)	29 (7)	24
State Library Agencies	0 (0)	0 (0)	20 (2)	0 (0)	20 (2)	10 (1)	60 (6)	10
All Groups	5%	16%	20%	2%	28%	16%	35%	86

* It was possible to check more than one category

5 percent reported lack of member interest as a reason, although 13 percent of the national library associations reported lack of member interest. Thus, it appears that the associations queried who do not sponsor continuing education programs do not do so primarily because of general lack of development capability or budgetary constraints, not through any lack of interest on the part of the membership.

Eighty-one percent of those 150 associations sponsoring programs reported having a specific person or group responsible for continuing education. (See Table 4) It can be seen that where associations do have continuing education programs, there is usually some person or group specifically designated with responsiblity for them.

Table 5 shows the breakdown by time worked and salary status for the 91 of the 150 associations with continuing education programs reporting individuals responsible for continuing education. The non-health professions reported the largest percentage (61 percent) of full time positions, while in the library associations only the state library agencies reported any person with full time responsibility and this 33 percent represented only three people.

Table 6 summarizes the time and salary status data reported by the associations indicating a group responsible for the continuing education program. Of the 83 associations, only 24 percent reported "full time" groups, (this is defined as groups responsible for continuing education programming only, not necessarily a full time work week). The small numbers of salaried groups seem to

TABLE 4

ASSOCIATIONS REPORTING PERSON OR GROUP WITH RESPONSIBILITY FOR CONTINUING EDUCATION PROGRAMS

Type of Association	Percentage Reporting Person or Group	N
Health Professions	86% (49)	57
Non-Health Professions	85 (39)	46
National Library Associations	77 (10)	13
State Library Associations	79 (11)	14
State Library Agencies	65 (13)	20
All Groups	81%	150

TABLE 5

ASSOCIATIONS REPORTING FULL OR PART TIME, SALARIED OR VOLUNTEER, PERSON(S) RESPONSIBLE FOR CONTINUING EDUCATION

Type of Association	Percentage Reporting Person						N
	Full or Part Time			Salary Status			
	Full Time	Part Time	No Response	Salaried	Volunteer	No Response	
Health Professions	28% (12)	37% (16)	35% (15)	44% (19)	30% (13)	26% (11)	43
Non-Health Professions	61 (17)	25 (7)	14 (4)	64 (18)	14 (4)	21 (6)	28
National Library Associations	0 (0)	43 (3)	57 (4)	43 (3)	57 (4)	0 (0)	7
State Library Associations	0 (0)	25 (1)	75 (3)	0 (0)	100 (4)	0 (0)	4
State Library Agencies	33 (3)	67 (6)	0 (0)	56 (5)	0 (0)	44 (4)	9
All Groups	35%	36%	29%	49%	27%	23%	91

TABLE 6

ASSOCIATIONS REPORTING FULL OR PART TIME, SAIARIED OR VOLUNTEER, GROUPS RESPONSIBLE FOR CONTINUING EDUCATION

Type of Association	Percentage Reporting Group						N
	Full or Part Time			Salary Status			
	Full Time	Part Time	No Response	Salaried	Volunteer	No Response	
Health Professions	22% (7)	25% (8)	53% (17)	6% (2)	75% (24)	19% (6)	32
Non-Health Professions	31 (8)	15 (4)	54 (14)	19 (5)	62 (16)	19 (5)	26
National Library Associations	22 (2)	22 (2)	56 (5)	0 (0)	89 (8)	11 (1)	9
State Library Associations	18 (2)	0 (0)	82 (9)	0 (0)	82 (9)	18 (2)	11
State Library Agencies	20 (1)	80 (4)	0 (0)	80 (4)	0 (0)	20 (1)	5
All Groups	24%	22%	54%	13%	68%	18%	83

reflect traditional association structure, that is, many duties are performed by committee groups without renumeration.

Table 7 shows the percentage of associations with licensure or certification programs and the extent to which continuing education is counted toward licensure or certification within the responding professional association. In the health related professions, of the 67 percent of associations reporting administering certification programs, 32 percent report participation in their continuing education program as being counted toward licensure or certification. Of the responding state library agencies 5 (25 percent) report using continuing education for this purpose while the library groups in general report lower utilization of continuing education--it must also be remembered that in many instances they do not have licensure or certification programs (e.g. 10 of the 13 national library associations (77 percent) report no such programs.) In addition, the non-library groups were chosen partially on the basis of a known interest in continuing education fields, and continuing education program development has traditionally been closely linked to preparation for licensure or certification programs.

Respondents were asked to distinguish those levels within the profession which the association felt responsible for serving and those which the association's continuing education program was currently designed to serve. (See Tables 8 and 9)

Comparison of Tables 8 and 9 reveals that these groups do not provide continuing education programs to membership levels for which they otherwise feel responsible. For example, while 93% of

TABLE 7

ASSOCIATIONS REPORTING PARTICIPATION IN CONTINUING EDUCATION PROGRAMS AS COUNTED TOWARD METHODS OF LICENSURE OR CERTIFICATION IN THE PROFESSION

Type of Association	Percentage Responding				Total	N
	Have no Licensure	C.E. Counts Toward Licensure or Certif.		No Response		
		Yes	No			
Health Professions	23% (13)	32% (18)	35% (20)	10% (6)	100%	57
Non-Health Professions	39 (18)	17 (8)	35 (16)	9 (4)	100	46
National Library Associations	77 (10)	7 (1)	15 (2)	0 (0)	99*	13
State Library Associations	21 (3)	14 (2)	57 (8)	7 (1)	99*	14
State Library Agencies	45 (9)	25 (5)	20 (4)	10 (2)	100	20
All Groups	35%	23%	33%	9%	100%	150

* Total differs from 100% due to rounding.

TABLE 8

LEVELS WITHIN THE PROFESSION WHICH THE ASSOCIATION CONSIDERS ITSELF RESPONSIBLE FOR SERVING*

Type of Association	Percentage Serving Level						N
	Professional		Sub-Professional				
	Experienced	Beginning	Experienced	Beginning	Technician	Other	
Health Professions	96% (55)	70% (40)	31% (18)	19% (11)	23% (13)	12% (7)	57
Non-Health Professions	93 (43)	91 (42)	54 (25)	33 (15)	28 (13)	17 (8)	46
National Library Associations	77 (10)	77 (10)	38 (5)	38 (5)	15 (2)	31 (4)	13
State Library Associations	86 (12)	86 (12)	79 (11)	79 (11)	71 (10)	64 (9)	14
State Library Agencies	95 (19)	95 (19)	90 (18)	85 (17)	70 (14)	40 (8)	20
All Groups	93%	82%	51 %	39%	35 %	24 %	150

* Respondents could check more than one category

TABLE 9

LEVELS WITHIN THE PROFESSION WHICH THE ASSOCIATION'S CONTINUING EDUCATION PROGRAM IS DESIGNED TO SERVE*

Type of Association	Percentage Serving Level						N
	Professional		Sub-Professional		Technician	Other	
	Experienced	Beginning	Experienced	Beginning			
Health Professions	79% (45)	60% (34)	23% (13)	17% (10)	16% (9)	26% (15)	57
Non-Health Professions	67 (31)	63 (29)	26 (12)	22 (10)	22 (10)	24 (11)	46
National Library Associations	77 (10)	77 (10)	38 (5)	31 (4)	23 (3)	15 (2)	13
State Library Associations	57 (8)	57 (8)	50 (7)	50 (7)	35 (5)	57 (8)	14
State Library Agencies	70 (14)	70 (14)	65 (13)	65 (13)	55 (11)	25 (5)	20
All Groups	72%	63%	33%	29%	25%	27%	150

* Respondents could check more than one category

all groups feel association responsibility to serve experienced professionals, only 72% provide continuing education at this level. National library associations seem to be the group with the closest relationship between perceived levels of responsibility and actual continuing education programming, although the extent of their programming was not evaluated.

One hundred thirty-five of the 150 associations (90%) reporting continuing education programs also reported having made some attempt to identify the continuing education needs of their audiences. Surveys and questionnaires of members taking continuing education courses, and interviews or consultation with members of the profession were the methods most often cited. Very few groups reported more sophisticated programs of research behind program planning.

Table 10 indicates that financial support for research and development of new continuing education programs is primarily (67 percent) drawn from dues income. Similarly, ongoing programs are financed through dues income (51 percent) and service or tuition fees (57 percent)-- see Table 11. As we are dealing here largely with non-profit professional societies who are in general dependent on dues income for their financial base, this is to be expected. State library agencies were the only group reporting substantial income from grant sources reflecting available state fund allocations.

Short courses, seminars, workshops and lecture series were by far the most utilized form of delivery mechanism reported for continuing education programs, with 93 percent of all groups

TABLE 10

METHODS OF FINANCING RESEARCH AND DEVELOPMENT
OF NEW CONTINUING EDUCATION PROGRAMS

Type of Association	Funding Source							N
	Dues Income	Contributions	Endowments	Income From Foundations	Grants From Foundations	Grants From State, Local, Federal Agency	Other	
Health Professions	86% (49)	30% (17)	5% (3)	14% (8)	11% (6)	16% (9)	40% (23)	57
Non-Health Professions	59 (27)	9 (4)	2 (1)	9 (4)	6 (3)	4 (2)	63 (29)	46
National Library Associations	77 (10)	8 (1)	8 (1)	0 (0)	15 (2)	15 (2)	8 (1)	13
State Library Associations	100 (14)	7 (1)	0 (0)	0 (0)	0 (0)	36 (5)	14 (2)	14
State Library Agencies	0 (0)	0 (0)	0 (0)	0 (0)	5 (1)	55 (11)	50 (10)	20
All Groups	67%	15%	3%	8%	8 %	19%	43%	150

* Respondents could check more than one category

TABLE 11

PRIMARY SOURCE OF FINANCIAL SUPPORT OF ONGOING CONTINUING EDUCATION PROGRAMS*

Type of Association	Funding Source								N
	Service or Tuition Fees	Dues Income	Contributions	Endowments	Income From Investments	Grants From Foundations	Grants From Local, State Agency	Other	
Health Professions	68% (39)	60% (34)	17% (10)	7% (4)	5% (3)	4% (2)	14% (8)	14% (8)	57
Non-Health Professions	74 (34)	46 (21)	4 (2)	2 (1)	7 (3)	4 (2)	4 (2)	19 (9)	46
National Library Associations	46 (6)	69 (9)	8 (1)	0 (0)	0 (0)	8 (1)	0 (0)	8 (1)	13
State Library Associations	29 (4)	86 (12)	0 (0)	0 (0)	0 (0)	0 (0)	21 (3)	21 (3)	14
State Library Agencies	10 (2)	0 (0)	0 (0)	0 (0)	0 (0)	5 (1)	55 (11)	55 (11)	20
All Groups	57%	51%	9%	3%	4%	4%	16%	21%	150

* Respondents could check more than one category

reporting use of these techniques, (See Table 12). Journals and other publications were reported in use by 65 percent of the associations.

Audio tapes were reported in use by 29 percent of the associations, 20 percent report use of university or college conducted courses, with 15 percent (2) of the national library associations reporting use of such courses.

Library associations in all three library groups reported use of fewer different types of delivery mechanisms than did the non-library professions. The library groups appear to rely primarily on short courses and journal publications, while the non-library groups use audio tapes, television, programmed instruction and correspondence courses as well. Short courses appear as the most used form, with 93 percent of the associations in all groups reporting their use of this form. Other types of continuing education activities (Table 13) include the operations of clearinghouse activities for information on various continuing education programs of interest to members, reported by 54 percent of the associations and publication of directories of continuing education opportunities for members (25 percent).

Summary and Conclusions

Among the associations surveyed, the non-library professions appear to be more actively involved in providing continuing education for their members than are the library groups. However, such factors as continuing education credit for certification or licensure and a

TABLE 12

DELIVERY MECHANISMS UTILIZED IN CONTINUING EDUCATION PROGRAMS*

Type of Association	Delivery Mechanism								N
	Short Courses...	Journals...	Television	Audio Tapes	Programmed Instruction	Correspondence Courses	University or College Courses	Other	
Health Professions	91% (52)	68% (39)	26% (15)	39% (22)	17% (10)	12% (7)	21% (12)	23% (13)	57
Non-Health Professions	96 (44)	67 (31)	11 (5)	33 (15)	20 (9)	30 (14)	22 (10)	13 (6)	46
National Library Associations	100 (13)	61 (8)	0 (0)	31 (4)	0 (0)	0 (0)	15 (2)	31 (4)	13
State Library Associations	86 (12)	71 (10)	7 (1)	7 (1)	0 (0)	0 (0)	14 (2)	7 (1)	14
State Library Agencies	95 (19)	50 (10)	10 (2)	5 (1)	5 (1)	15 (3)	20 (4)	20 (4)	20
All Groups	93%	65%	15%	29%	13 %	16%	20%	19 %	150

*Respondents could check more than one category.

TABLE 13

ACTIVITIES INCLUDED IN CONTINUING EDUCATION PROGRAMS*

Type of Association	Activity								N
	Clearinghouse	Publish C.E. Directory	Organize Pre-prints	Organize Information Exchange Grp.	Develop Tutorial Centers	Sponsor Book Clubs	Sponsor Current Awareness Service	Other	
Health Professions	46% (26)	32% (18)	3% (2)	14% (8)	5% (3)	0% (0)	2% (1)	9% (5)	57
Non-Health Professions	57 (26)	30 (14)	11 (5)	11 (5)	2 (1)	4 (2)	7 (3)	9 (4)	46
National Library Associations	69 (9)	8 (1)	0 (0)	15 (2)	0 (0)	0 (0)	8 (1)	15 (2)	13
State Library Associations	50 (7)	14 (2)	21 (3)	21 (3)	0 (0)	0 (0)	0 (0)	7 (1)	14
State Library Agencies	65 (13)	10 (2)	0 (0)	10 (2)	5 (1)	5 (1)	25 (5)	10 (2)	20
All Groups	54%	25%	7%	13%	3%	2 %	7%	9%	150

* Respondents could check more than one category

broader range and level of funding probably contribute heavily to this phenomenon. Absence of program development capability and budgetary constraints are evidenced by all groups, resulting in a low incidence of salaried staff and restrictions on program format. Sixty-four percent of the groups provide continuing education opportunities for their membership, and another 8 percent are planning to do so within the next two years. Only 6 percent reported that sponsorship of continuing education is incompatible with the goals of the association (only three library associations reported continuing education as incompatible). The nationally based organizations reported a greater responsibility for providing services to members, particularly those at the professional level. State associations and agencies indicate greater responsibility for those at the subprofessional and technical levels both in terms of general services as well as continuing education. Associations operating at the state level were, however, the ones reporting the lowest proportion of continuing education programs.

Dues income appears to be the greatest source of financial support for continuing education programs. Service or tuition fees, although reported by most as being an important source of funds, do not appear to in any way replace the basic dues support. Indeed, library groups report a higher incidence of dues support. Only the health professions report any substantial support from grants and endowments.

Delivery mechanisms showed greater variety within the non-library groups although the tradional forms of short courses and

seminars and the publication of journals are the principal methods in use for all groups.

FOOTNOTES

1. Gale Research Company. Encyclopedia of Associations; 7th Edition. Vol. 1: National Organizations of the U.S. Detroit, Michigan, Gale Research Company, 1972.

2. R.R. Bowker Company. The Bowker Annual of Library & Book Trade Information. 18th Ed. 1973. New York, R.R. Bowker, 1973. pp. 121-186.

APPENDIX A

Questionnaire on Continuing Education

1. Association Name:
   Address:

2. Number of members _____ _____Individual _____Institutional

3. Is membership -- _____National _____Regional
   _____State _____Local (metropolitan)

4. Does your Association sponsor a program of continuing education for members? _____Yes _____No

   If your answer to question 4 is Yes, please proceed directly to question 8.

   If your answer to question 4 is No, proceed with questions 5, 6, and 7.

5. Do you have plans to sponsor education programs for your members within the next two years? _____Yes _____No

6. If not, is this policy due to
   _____Lack of member interest
   _____Incompatibility with expressed goals of the Association
   _____Absence of program development capability
   _____Absence of marketing capability
   _____Budgetary constraints
   _____Other (please explain)

7. Please add any other comments you may wish to make.

Thank you - Please return this questionnaire to --

Julie A. Virgo
Director of Medical Library Education
Medical Library Association
919 N. Michigan Avenue - Suite 3208
Chicago, Illinois 60611

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8. What are the goals or objectives of your continuing education program?

9. Does your Association have a specific person and/or group that has special responsibility for continuing education?
_____Yes _____No

If Yes, please indicate which of the following apply to your organization. (If you have a written job description please attach a copy.)

_____Person, title_____
_____Full time on continuing education
_____Part-time on continuing education (% time_____)
_____Salaried
_____Volunteer

_____Group, title_____
_____Full time on continuing education
_____Part-time on continuing education (% time_____)
_____Salaried
_____Volunteer

10. Is participation in your continuing education program counted toward the methods of licensure or certification prevailing in your profession?
_____Yes _____No _____We do not have licensure or certification

11. Which of the following levels of activity in your profession do you consider your Association responsible for serving?
_____Experienced, qualified professionals
_____Beginning, qualified professionals
_____Experienced sub-professionals (Experienced persons employed in professional level positions who do not possess professional credentials)
_____Beginning sub-professionals (Persons employed in professional level positions who possess neither professional credentials nor experience)
_____Technician level assistants
_____Other (please describe)

12. Which of these levels of activity is your program currently designed to serve?

13. How have you identified the continuing education needs of your audience?

14. How do you intend to assess future needs?

15. How do you finance the research and development of new continuing education programs?

_____Dues income
_____Contributions
_____Endowments
_____Income from investments
_____Grants from foundations
_____Grants from local, state or federal governmental agencies
_____Other (please describe)

16. Do you evaluate your programs? _____Yes _____No
If Yes, how? (please describe)

17. Please indicate the primary source of financial support of ongoing continuing education programs.

_____Service or tuition fees
_____Contributions
_____Income from investments
_____Dues income
_____Other (please describe)
_____Endowments
_____Grants from foundations
_____Grants from local, state or federal agencies

18. Please indicate the delivery mechanisms utilized in your Association's continuing education program.

_____Short courses, seminars, workshops, lecture series
_____Journals and/or other publications
_____Closed circuit or educational television
_____Audio tapes
_____Programmed instruction
_____Correspondence courses
_____University or college conducted courses
_____Other (please describe)

19. Does your continuing education program include any of the following activities?

_____Serving as a clearinghouse for information on various continuing education programs of interest to your members
_____Publishing a directory of continuing education opportunities
_____Organizing preprint circles
_____Organizing information exchange groups
_____Developing tutorial centers
_____Sponsoring book clubs
_____Sponsoring current awareness services
_____Other: Please specify

20. Please add any other comments you may wish to make.

Thank you - Please return this questionnaire to --

Julie A. Virgo
Director of Medical Library Education
Medical Library Association
919 N. Michigan Avenue - Suite 3208
Chicago, Illinois 60611

APPENDIX B

Listing of Fields By Group

Fields Surveyed	Number of Respondents
1. Health Science Professions	
Allied Health	4
Dentistry	6
Health Services Institutions	3
Legal Medicine	1
Medical Boards	5
Medical Education	2
Medical/Hospital Administration	3
Medical Specialists	16
Nursing	4
Optometry	3
Osteopathy/Homeopathy	3
Pharmacy	3
Physicians - general	4
Physicians - by type	4
Psychiatry	3
Research and Information Institutions	10
Surgeons	6
Veterinary Medicine	1
TOTAL	80
2. Non-Health Professions	
Accounting	4
Administration	5
Agriculture	2
Architecture	2
Banking	5
Business	4
Clergy	2
Education	7
Engineering	16
Finance	1
Insurance	7
Law	5
Social Work	0
TOTAL	60

3. National Library Associations

Administration	0
Church	5
Information Science	2
Library Education	2
Medical	3
National *	3
Non-Print	1
Research	3
Special	6
Technical Services - Public	3
TOTAL	28

4. State Library Associations

State	31
Regional	3
Territorial	1
Provincial	3
TOTAL	38

5. Library Agencies

State	30
Territorial	0
TOTAL	30

TOTAL	236

* Unless more specific

CHAPTER VII

A MODEL CONTINUING EDUCATION PROGRAM FOR HEALTH SCIENCES LIBRARY PERSONNEL

The ideas presented in this model were synthesized from numerous sources studied during this project. While attempting to be responsive to the environmental constraints in which health sciences library personnel function, the model is not limited to only that which can be expected to be accomplished in the most immediate future. The next chapter will detail the extent to which the model has been developed to date.

This chapter is divided into eight sections. Within each section there may be models presented which form components of the overall model.

1. Optimal Use of Available Resources

While this attitude pervades the entire model, it is deemed sufficiently important to discuss first separately, and again where it is appropriate throughout the model.

In a volunteer organization a variety of resources may be available, to some extent or another. These resources may include money, volunteer members working or teaching in the field, and paid staff with educational expertise. Even given all the monetary support desired, the members of the organization can contribute to the program in ways which no paid staff can. The members working in the field,

at the cutting edge of the profession, are those who are most in touch with new trends or gaps. They are in a position to identify potential course designers or instructors who demonstrate superior knowledge or job performance.

In addition, when financial resources are limited, volunteer committees can effectively accomplish and coordinate many aspects of even a large continuing education program.

2. The Target Audience

Data from the present and related studies (1-8) indicate that personnel working in health sciences libraries may usefully be categorized in the following unconventional way.

FIGURE I

CATEGORIZATION OF LIBRARY PERSONNEL

	Professional (MLS or equivalent)	Technician	Clerical Support Staff
Jack-of-all-trades			
Specialist e.g. reference, serials.			
Middle Management/ Administrator			

Each cell in this figure calls for relatively unique continuing education programs as they relate to that cell. There will of course be some

overlap, particularly as individuals wish to move from one kind of position to another, or up or down the hierarchy within each column. In the future, as some academic requirements are replaced by experience or demonstrated competency requirements, we may see some movement from the right hand columns to the left.

3. Needs Assessment

What kinds of continuing education needs do each of these cells represent?

It is in the area of needs assessment that continuing education programming is most vulnerable. While it is possible for a group of knowledgeable practitioners to identify rapidly moving areas within medical librarianship it is difficult for the individual to plug into a system, articulating exactly what it is he needs, and at what level.

It may convincingly be argued that to acquire skills or knowledge is but one goal of continuing education (as juxtaposed to the reinforcement of feelings of self as a professional or technician) yet it is critical to be able to identify just what that skill or goal is. The development of individual self-assessment instruments for each class of position in Figure I is critical to the design and implementation of an accountable continuing education program. In order to develop such tests some form of task inventory must be compiled for each cell.

Some further inferences can be drawn from Figure I. Persons working in the "jack-of-all-trades" category often have sole responsibility for the library's services. It is these people who need the

broadest range of skills and knowledge yet have the least opportunity of obtaining guidance or training in-house.

There may be considerable overlap between the "technician" and "clerical support staff" except in large libraries. This model limits itself to the professional and technician, except where the clerical support staff acts in a technician capacity.

A living model would hope to include regularly updated demographics about its potential target audience. Such demographics would include type of position, academic background, previous experience, and other continuing education activities.

A needs assessment model must incorporate two very different components. The first embraces the identification of the continuing education needs of a profession so that programs can be developed to meet those needs. This model proposes the identification of needs based on the following recurring approaches.

1. Identification of changes in the field by consensus of an informed group of practitioners (a task force, committee, or special interest group) using group methods such as nominal group technique or a delphi approach.
2. Identification of changes in the field as evidenced by changes in the published literature of the field (a more dated but objective and unobtrusive measure of change).
3. Sample survey of practitioners in the field on their perceived needs.
4. Periodic examination of library practice itself, through task analysis or other form of task identification.

5. Interviews with selected key people in the profession.
6. Collection of demographic data from health sciences library staffs.

All of these methods would not need to be followed every year. A sample questionnaire survey plus informed group consensus annually, might be validated periodically by one or two of the other approaches.

Once needs have been identified, decisions have been made as to which needs are amenable to being met through continuing education, and continuing education programs have been developed on different topics and aimed at different audiences (differentiated by academic qualifications, experience, and abilities) we then confront the second component of a needs assessment model -- the individual's own needs assessment. This component has rarely been made explicit in the literature of needs assessment.

How can the individual tap into the system, at the appropriate level and for the specific content need? Self-assessment tests, as described earlier, provide one approach. Other alternatives can be specific course descriptions, pre-requisites and their equivalencies spelled out for courses, counselling opportunities, the development or identification of recommended course sequences, and the development or identification of courses on very specific topics. A clearinghouse of information on continuing education activities can bring to the individual's attention the opportunities that do exist.

4. Formats for Delivering Continuing Education

Once a continuing education need has been established, consideration must be given to the best way in which to meet the need. Not all needs

can be filled through training, under some circumstances the most that can be hoped for is "to increase awareness" -- that is particularly true in areas that are conceptual or attitudinal e.g. new roles for health sciences libraries, human relations.

The choice of format will also be governed by the resources available, and the environment in which library staffs work.

We know that health sciences library staffs receive more support to attend professional meetings than independent continuing education courses (Chapter V), that persons who receive no paid release time nor financial support to attend meetings or courses will attend few of them, and that people working in situations where no one can cover their jobs are going to have difficulty obtaining release time. We also know that the salaries received by the large majority of health sciences library staffs are not sufficient to support expensive continuing education activities when such activities are not supported by the employing institution. Furthermore, we know that most well planned formal continuing education activities providing feedback to participants are expensive.

Taking into account these characteristics and other data reported in this study and in Chen's (9), Stone's (10) and Breiting's (11) studies, the following programs and formats are proposed:

Increasing Professional Awareness

- Provide a clearinghouse of continuing education activities.
- Provide a review of publications and packaged programs, relevant to professional development for library staffs.
- Stress the variety and availability of continuing education experiences.
- Stimulate the formation of journal clubs or study groups.

- Make audiocasettes available from the annual meeting, especially the contributed papers.
- Provide half-day sessions immediately prior to the annual meeting (and in conjunction with it) on administrative topics aimed at administrators of large libraries.
- Write news items or series on new roles for health sciences libraries.

Formal Courses

- Provide planned sequences of short (1-2 day) formal courses to be held in conjunction with the annual meeting -- when many people get their expenses paid or release time.
- Provide the same courses at the local level, in cooperation with regional groups of the organization, library schools, local groups, or related organizations -- for people who cannot attend the annual meeting but may attend programs in closer geographic proximity.
- Provide intensive residential courses on specific topics. Because of the longer period of time required for participants to be away from their jobs and the proportionately higher expenses involved, these programs have less wide an appeal. For this reason it may be best to join forces with a related organization to give as large a base of potential participants as possible.

Home Study Programs

This class of continuing education activity describes those programs where participants alone, or in groups, work through a prescribed plan of study and receive feedback and evaluation.

Programs included in this model are:

- Syllabi with self-assessment instruments
- Cassette/workbook packages
- Correspondence courses

Support Materials

Materials aimed at assisting local groups within the organization to develop and upgrade their own continuing education program activities are needed. The materials would be of two kinds:

- subject content modules
- procedures, and guidelines for continuing education programming

The modules are self-contained building blocks which can be used by local groups, universities, or other organizations as parts of a continuing education program. Examples of the procedures and guidelines will be described in the remaining sections of the model plan.

Counselling/Advising Service

This component is similar to Knox's "linkage agent" concept (12). Individual members of the organization can call or write, describing a particular continuing education need or career goal. A qualified person would work with the inquirer to identify sources of continuing education experiences to fit that need. Similarly, a librarian could call for information on programs available for staff development to use in his/her own library.

An extension of this idea is the provision of a consulting service for specific library problems. The individual could be directed to likely sources of assistance, or an independent study program could be mapped out to assist in the problem solving. Similarly a consulting service could be provided to local groups wishing to develop their own continuing education programs.

5. Methods for Developing Programs

This section of the model outlines procedures for developing quality formal continuing education courses, workshops, and institutes. The procedures can readily be adapted to the development of other kinds of continuing education programs.

Most organizations do not have unlimited resources in developing continuing education programs. With limited resources it becomes even more important to be as cost/effective as possible and to be cost/effective requires the maintenance of quality control in the design of programs.

Quality control in professional continuing education is obtained when it is systematically built into the entire educational experience -- from the specification of objectives to the development of the program, the choice of instructor, the physical surroundings, the screening of participants, the evaluation of the experience both short and long-term, and the feedback which is then incorporated in the program the next time it is offered.

Once a topic for a course has been decided on from the needs assessment, one or two people who are considered among the most

capable in the country to design that particular course, are selected. A Continuing Education Committee can play a valuable role in the selection process. Depending on the nature of the course, library school faculty or practicing librarians may be used. Some librarians are very knowledgeable in their field but have had little or no experience in designing courses. Several procedures may assist them in this phase of the work.

Each course designer may be assigned a specific person, either on staff or from a Continuing Education Committee. That person acts as a liaison between the course designer and the organization. The continuing education liaison person assists the designer in the mechanics of the course design.

A "letter of agreement" can be used between the course designer and the organization to spell out both the end product that is expected from the course designer and what the course designer can expect of the organization. It is desirable for the end product to include

1. An indication of the target audience for whom the program is being designed.
2. Any pre-requisites for course registrants.
3. A statement of course objectives in terms of the skills or knowledge that a participant may expect to have at the completion of the course.
4. A pre-test that potential registrants may take to determine if they already know the subject matter of the course.
5. A syllabus or workbook to be used by the participant during the course and to be retained for future reference. The syllabus also would include a bibliography and suggested time schedule for the various elements or segments of the course.

6. The over-all length of the course.

7. Reading lists or other materials which are to be sent to the participant in advance of the course, and any materials which are to be distributed as handouts during the course.

8. A summary of suggestions for instructors if the course is to be taught by other instructors. Such suggestions might include whether the syllabus should be mailed in advance, any special classroom arrangements or facilities, models to be used, and copies of slides or overhead transparencies.

The "letter of agreement" may also spell out honoraria, time schedules for the review and completion of various stages of the product, and other paperwork requirements. The course liaison person's name, address and telephone number should be included with a reminder that that individual will handle any questions, monitor the progress of the work, and keep in touch. The course designer may also be guided to texts which deal with designing continuing education courses, testing and writing objectives. The course liaison people should be encouraged to consult with educational consultants and subject content people in order to provide feedback to the designers and in the evaluation of the final product. Evaluation procedures are discussed in section 7 of this chapter.

6. Identifying, Training and Evaluating Instructors

As with course designers, instructors may or may not be people with previous teaching experience. They may be chosen on the basis of being among the most capable in the subject area of the program. Informed colleagues are usually the best sources for suggestions on potential instructors. A person's speaking and teaching ability should be investigated before the person is invited to instruct. Often the

course designer will also be the instructor.

The instructor should receive the course package in advance of the course, not only to prepare for it, but also to determine:

1. Whether the materials should be sent to participants in advance of the course.
2. Any additional materials he/she may wish to add.
3. The type of classroom arrangement and any special equipment needed.
4. The maximum class size.

If an instructor has not taught that course before, he/she should be encouraged to speak with others who have. Instructors may be sent information on "effective teaching" prior to teaching the course.

Where possible, participants' backgrounds and own personal objectives for taking the course should be obtained and forwarded to the instructor. At the conclusion of each course it is helpful for instructors to receive tabulations and comments from the participants' evaluations.

A file on each instructor's performance can be helpful in deciding whether or not to invite that person to teach again.

7. The Mechanics of Conducting Programs

Having assessed the needs, developed a quality program, and assigned the instructor, what arrangements should be taken into account in presenting a program?

The location may be decided upon by the organization, or may be predetermined by a local group who has requested the course. No matter which way it is decided, a designated person must assume responsibility

for publicity, registration, room arrangements, availability of equipment in the classroom if necessary, distribution of materials, collection of evaluation forms, distribution of certificates (if given), and coffee breaks!

Evaluation procedures should provide for the evaluation of the student, the instructor, the course content, and the physical arrangements.

If the organization records continuing education attendance, then files will need to be maintained in a central location. In the recent N.C.L.I.S. study (10) the maintenance of central record keeping for continuing education activities was listed as very important to study participants.

Quality Control in Continuing Education

A reliable and excellent continuing education plan must incorporate quality controls at each step. The model proposed in this paper incorporates the same characteristics of quality control that are found in industrial models. These characteristics are illustrated in Figure 2 on the next page.

Summary

This chapter has presented a model continuing education program for health sciences library personnel. The model addresses the following areas

1. Optimal use of available resources
2. The target audience

FIGURE 2

QUALITY CONTROL IN INDUSTRY AND CONTINUING EDUCATION

INDUSTRY	CONTINUING LIBRARY EDUCATION
Market Research to Identify Marketability	Assess Needs -Survey; informed committee consensus
Product Design	Decide on Subject Content and Objectives -Planning committee and subject 'experts'
Manufacture Product -Inspect during manufacture	Develop Package -Objectives approved by liaison -Drafts of materials approved for content and readability
-Inspect after manufacture -Against performance specifications	-Evaluate against package specifications -Letter of Agreement -Objectives
Evaluation in the Field After the Product Has Been Sold	Evaluation in the Field -Participants' ability to accomplish course objectives -Evaluation of optimal use of course time -Instructor evaluation -Follow-up evaluations
Feedback from Field Experience to Product Design	Feedback -To planning committee -To course designer -To instructor

3. Needs assessment
   - the profession
   - the individual
4. Formats for delivering continuing education
   - increasing professional awareness
   - formal courses, institutes, and workshops
   - home study programs
   - support materials
   - counselling/advisory/consulting services
5. Methods for developing programs
6. Identifying, training, and evaluating instructors
7. The mechanics of conducting programs
8. Quality control in continuing education.

Footnotes

1. Kronick, D.A., Rees, A.M., Rothenberg, L. An investigation of the educational needs of health sciences library manpower: I. Definition of the manpower problems and research design. Bulletin of Medical Library Association. 58:7-17 (January) 1970.

2. Rothenberg, L., Rees, A.M., Kronick, D.A. An investigation of the educational needs of health sciences library manpower: II. Health-related institutions and their library resources. Bulletin of Medical Library Association. 58:510-20 (October) 1970.

3. Rothenberg, L., Kronick, D.A., Rees, A.M. An investigation of the educational needs of health sciences library manpower: III. Manpower supply and demand in health sciences libraries. Bulletin of Medical Library Association. 59:21-30 (January) 1971.

4. Rothenberg, L., Rees, A.M., Kronick, D.A. An investigation of the educational needs of health sciences library manpower: IV. Characteristics of manpower in health sciences libraries. Bulletin of Medical Library Association. 59:31-40 (January) 1971.

5. Kronick, D.A., Rees, A.M. An investigation of the educational needs of health sciences library manpower: V. Manpower for hospital libraries. Bulletin of Medical Library Association. 59:392-403 (July) 1971.

6. Schick, F.L. ed. Directory of health sciences libraries in the United States, 1969. Chicago, American Medical Association, Medical Library Association, 1970.

7. Crawford, Susan. Health Sciences Libraries in the United States, 1961-1973. Unpublished report to the Committee on Surveys and Statistics of the Medical Library Association, June, 1974.

8. Crawford, Susan and Dandurand, Gary. Directory of Health Sciences Libraries in the United States, 1973. Chicago, American Medical Association, 1974.

9. Chen, C.C. "An investigation of the continuing education needs of New England health sciences librarians." Bulletin of Medical Library Association. 64:322-24 (July) 1976.

10. Stone, E.W., Patrick, R. and Conroy, B. Continuing Library and Information Science Education. Final Report to the National Commission on Libraries and Information Science. Washington, D.C.: American Society for Information Science, 1974.

11. Breiting, A., Dorey, M. and Sockbeson, D. "Staff development in college and university libraries." Special Libraries 67:305-10 (July) 1976.

12. Knox, Alan. Helping Adults to Learn. Washington, D.C.: CLENE, 1976. Concept paper no. 4.

CHAPTER VIII

THE MEDICAL LIBRARY ASSOCIATION'S CONTINUING EDUCATION PROGRAM 1973-1975

This chapter describes the Medical Library Association's continuing education program:

1. as it was at the beginning of the grant period (1973), where relevant, and
2. as it had developed by the end of 1975, the year in which the project period concluded.

Progress towards the model described in the preceding chapter can be measured by a comparison of the model with the actual program at these two points in time. Each component of the model is discussed in the same order as before. The chapter concludes with a recapping of subsets of the model yet to be achieved.

1. Optimal Use of Available Resources

At the time the project began, the Medical Library Association had recently appointed a paid staff member to work in the area of the Association's education activities. Since 1958 the Association had offered formal continuing education courses at its Annual meetings and from 1965 at some of its larger regional meetings. These courses had been developed and administered by a voluntary Continuing Education Committee. As the program grew in size the Continuing Education Committee looked to the newly created position of Director

of Education for assistance. However, neither the Committee nor the Director of Education were sure what their relationship to each other should be, nor the most effective role each could play.

To develop a modus operandi for working together effectively and harmoniously the Committee and the project staff held a two-day meeting in Chicago, Working under the guidance of a facilitator (proveded by grant funds) who also had experience consulting with education staffs and committees in volunteer organizations, the group focused on the following topics:

1) The purpose of the Medical Library Association
2) Which of these purposes relate to education
3) Those unique contributions that can be made by a volunteer committee on continuing education
4) Those unique contributions that can be made by other groups in the Association, especially the Medical Library Education Group
5) Those unique contributions that can be made by a full-time headquarters staff
6) Those unique contributions that can be made by a Committee on Continuing Education
7) Those unique contributions that can be made by an expert advisory panel (expert in education and library education, perhaps not in every instance members of the Association)
8) The relationship between concepts of policy making, accountability, and implementation.

While these issues are basic, the process of addressing them in an orderly and unemotional manner could not have been achieved on a timely basis, or perhaps at all, without the assistance of a professional outside the organization with no loyalties to either Committee or staff. This assistance resulted in a commitment to, and an environment of trust for, the future development of the continuing education program. The meeting is reported in reference (10). This cooperative spirit will be evident in the following sections.

2. The Target Audience

The stated goal of the Medical Library Association is "the fostering of medical and allied scientific libraries". In order to accomplish this it follows that a supporting goal must be to foster the development of people staffing those libraries, at whatever level. However, an organization such as the Medical Library Association has as its prime responsibility the needs of its own members, whose dues to a large extent fund the Association's programs. When priorities must be set as to the level, and to what extent, to address continuing education programming, the needs of the membership (which is primarily at the professional level) will normally be met first. This consciously or unconsciously had been the policy prior to 1973.

In Chapter VII a figure characterizing the target audience within health sciences library personnel was shown. It is reproduced here for discussion purposes.

FIGURE 1

ORGANIZATION OF LIBRARY PERSONNEL

	Professional (MLS or equivalent)	Technician	Clerical support staff
Jack-of-all-trades	a	d	g
Specialist	b	e	h
Middle management/ administrator	c	f	i

As stated in the model, there may be considerable overlap between the "technician" and "clerical support staff" except in large libraries. The model limited itself to the professional and technician, except where clerical support staff function in a technician capacity.

An agreement between the Medical Library Association and the National Library of Medicine was reached in 1974 that the Association would accept major responsibility for continuing education needs at the professional level, and increasingly, at the technician level. Library staffs with no training or little experience would be the responsibility of the regional medical libraries. Since the regional medical libraries enter into individual contracts with the National Library of Medicine, and some regions are quite decentralized, this agreement may leave some segments of the untrained "grassroots" level without training opportunities, depending on the geographic area in which they are located. This was certainly the finding reported in Chapter IV and an informal survey shows that it is still the case in some areas.

The proposed model includes responsibility for these people, particularly when they occur in cell settings d and q of Figure 1.

Prior to 1973 there was little differentiation between the segments which make up health sciences library staffs. The recognition that different segments have different continuing education needs, and the development of some programs to be responsive to different needs has been a significant accomplishment during the years 1973-75. The programs developed during this time period are described more fully in the next section.

3. Needs Assessment

At the time this study was begun the kinds of continuing education activities undertaken by the Association were the one-day continuing education courses. By 1973 the Association had developed the strongest continuing education program of any of the library associations or other library organizations. Accomplishments during the following three years should not detract from the strength of the program relative to the "state-of-the-art" of continuing library education at that time.

Each year four or five new or revised course topics were decided upon as a result of the collective thinking of the Continuing Education Committee. Since the total number of current courses was not large (12 in January 1973) and only a few new ones were developed each year there were always several which seemed timely for developing.

As the program attempted to become more varied in responding to members' needs other sources of input needed to be considered. It was at this point that the present project began. Several different studies were begun to obtain information about the profession's continuing education needs.

Data from related recently completed continuing education needs surveys (1-5) were examined. A review of the published literature of medical librarianship at the present time and five and ten years before was carried out to identify changes in medical library practice and concerns (Chapter II and Working Paper No. 4). Two questionnaire surveys aimed at eliciting individuals' perceived continuing education

needs were conducted. On a recurring basis, individuals participating in the MLA continuing education program are being queried on unfulfilled perceived continuing education needs. An additional study was undertaken to determine the extent to which continuing education opportunities existed in the areas of the perceived needs.

The findings from these studies are remarkably consistent. At the professional level the same general topics were ranked highest as perceived needs for continuing education. These are:

Administration and management

Audiovisuals

Reference tools and services (including on-line systems)

Budgeting

In the MLA study specifically, although there were slight variations in ranking between the priorities of hospital librarians and medical school librarians, the same general topics were perceived as continuing education needs. These topics, in rank order of priority were:

1. New roles for health sciences librarians
2. Measurement and evaluation of library services
3. Audiovisual materials
4. Reference tools and services
5. Budget administration
6. Medical education: its implications for library service
7. Grant applications and management
8. Library planning -- space and equipment

9. SDI (Selective Dissemination of Information)
10. MEDLINE
11. Weeding and collection development

These perceived needs (primarily at the professional level) were then checked against the extent to which continuing education opportunities had been available in a twelve month period of time (Chapter III, Table 3). The only two subject areas from this list that had opportunities within more than one or two regional medical library geographic areas were audiovisuals (in 9 out of 11 regions at least one course was given) and reference tools and services (7 out of 11 regions held at least one course). While not all of the eleven top ranked needs may best be handled through continuing education programs, it would appear that appropriate programs on any of these topics are needed.

A second finding which came from the present study and was corroborated by Rothenberg et al. (1), Stone (3), and Chen (5) was that the non-professionals were concerned with acquiring skills and knowledge in library operations and technical procedures, subjects normally included as part of a master's program in librarianship, while the (professional) librarians were more concerned with library administration and management, and computer systems.

This information reinforces the conclusion drawn earlier that relevant continuing education programming must take into account not only the level (professional, technician) at which a person is working but also his/her environment. The "jack-of-all-trades"

technicians will need a broader set of basic library skills than the technician working in a larger library environment.

Looking at needs assessment from the other end of the spectrum, that of the individual plugging into the continuing education program, the Medical Library Association has begun to identify the basic competencies required by entry level librarians. While this is being done preparatory to the implementation of a new certification program, the testing process itself will yield useful data to the examinee on areas of less than satisfactory tested performance. With that information in hand, the individual can then proceed to plan continuing education experiences accordingly.

A similar testing device is being prepared for the technician level. Data is being collected on tasks undertaken by technicians at the present time, but the development of the tests will not be completed until late 1978 (tentative target date).

The continuing education programs being developed by the Medical Library Association now include educational objectives (e.g. "at the conclusion of this course participants will be able to - - -"). This enables participants to determine more clearly whether or not a specific course is aimed at his/her level. Where appropriate, pre-requisites or equivalents are spelled out, and courses are being developed to build on one another.

Since 1973 a "Clearinghouse of Continuing Education Opportunities" has been published monthly as a part of the MLA News. Information on courses and home study programs that would enhance the performance of health sciences library staffs is included. This means

that the listing is not limited to programs directed at medical librarians or even library staffs generally. Recent monthly issues have listed as many as 90 programs. The Clearinghouse provides information on existing programs that may be relevant to an individual's own needs.

A sample page from the Clearinghouse can be found at the end of this chapter as Appendix A.

4. Formats for Delivering Continuing Education

At the time the present project began the Medical Library Association's continuing education program was focused on nine one-day courses taught to 335 registrants at the Annual meeting and to 239 registrants at five locations at regional meetings (1972 data). By the end of the project period (1975) the continuing education program had almost tripled in the number of participants, number of courses offered, and number of geographic locations. The quality of the existing courses, which are discussed later, was also significantly further improved.

Needs Not Amenable to Course Programming

Not all needs identified in the MLA survey were viewed as training or continuing education needs. A conscious decision was made, when a "problem" or "need" was considered, on whether a course or some other format was the most appropriate mechanism for dealing with a problem. For example, the area of human relations training was ranked a little more than half way down the list of perceived continuing education needs (Chapter III, Table 2). The topic was one heavily focused on by the Ad Hoc

Committee on the Goals and Structure of the Medical Library Association. The Board of Directors of MLA passed a resolution directing the Director of Education to assess the feasibility and desirability of developing programs in the area of human relations (with special emphasis on inter-racial awareness).

An extensive literature search was conducted to locate materials which would be useful in designing, producing, and evaluating a human relations training program for the Medical Library Association. Three categories of information were examined:

1) descriptions of the possible forms this training could take
2) descriptions of actual programs used by other agencies
3) background materials which could be of use as the basis of the course designing process or as hand-outs to participants.

Annotated bibliographies were produced on the following topics:

1. Articles and books describing the various methods of laboratory education which are used in efforts to reduce racial prejudice and to promote better human relations.
2. Literature on the case method of training personnel managers, including collections of cases and discussions of how to write cases. We found an almost complete absence of published cases dealing with the minority group employees, which led us to suspect that the trend had been to use laboratory education methods in inter-racial awareness programs.

3. Articles and books describing the specific problems of supervising minority group employees and the general problems of minority employment. Very practical discussions of how to deal with the minority employee and the attitudes of the rest of the staff to his arrival were found in the literature of personnel management and industrial relations. These articles were often difficult to identify in the standard indexing tools -- we relied heavily on the special index files of the A. G. Bush Library, Industrial Relations Center, Chicago.
4. ERIC research reports selected from Research in Education. The literature of education contains the greatest number of accounts of actual human relations training programs, perhaps because of (1) the necessity of coping with desegregation in the public school system, (2) the wide availability of federal funds for programs to develop positive staff attitudes regarding integration, and (3) the necessity that some report of the programs be written for submission to the sponsoring agency. Research in Education also includes references to materials collected by the ERIC Clearinghouse on the Disadvantaged which was an excellent source of background materials promoting inter-racial awareness.
5. A bibliography of books promoting inter-racial sensitivity, recommended by the reference librarian of the Vivian G. Harsh Collection of Afro-American History and Literature.

This is a sample of the type of material which could be used as background reading for human relations training experience.

After examination of the materials, and discussions with consultants, it was decided that the Medical Library Association did not have the resources (neither people nor funds) to develop an effective program in this area. Since these programs were available to some extent through other organizations, it was decided that they would be listed in the Continuing Education Opportunities Clearinghouse but that MLA itself would not develop similar programs. The information and bibliographies developed in this project are submitted with this report as Working Paper No. 3 -- Human Rights Bibliography.

Increasing Professional Awareness

In a different instance a similar decision was reached -- that a training experience was not the direct solution to a stated need. From Chapter III of this report, Tables 1 and 2 showed that the number 1 perceived continuing education need was "new and innovative roles in health sciences librarianship". Both hospital and medical school librarians ranked each of the suggested "new roles" high. Yet the mechanics of implementing these new roles are very traditional. It is the imaginative way of packaging them that is different. LATCH (Literature-Attached-To-Charts) and "clinical librarians" are different ways of packaging and selling reference services. Rather than develop a course on "how I do x good" it was felt that descriptions of

specific innovative programs could serve as role models for other libraries to adapt to their own needs. Therefore, a series was begun in the MLA News on "New Roles for Health Sciences Librarians." Individuals were solicited to provide descriptions of programs in their libraries that they consider innovative. The name of the person responsible for the program is given so that he/she can be contacted for more information. An example from this series is given as Appendix B of this chapter.

The maintenance and publication of a Clearinghouse on Continuing Education Opportunities has been discussed in an earlier section of this chapter. It too is a mechanism for increasing professional awareness.

Through talks to groups of librarians around the country, and in news items in the MLA News, the concept that formal courses are not the only formats for continuing education is continually stressed by the MLA Division of Education staff. Individual problem solving projects, journal clubs, reading the professional literature, talking with colleagues, and forming study clubs are mentioned as other possibilities. The availability of programs from other organizations is also stressed. Increasing professional awareness has to play an important role in the MLA continuing education program since it is our belief that although continuing education is a shared responsibility between employer and employee, it is left most often for the initiative to begin with the employee.

Formal Courses

By 1972 the Medical Library Association had developed a strong program of one-day courses with carefully limited class sizes. These courses were taught the day or two preceeding the Annual Meeting of the Association and in conjunction with regional group meetings of MLA. At the time, the quality of the courses and supporting materials was relatively high, when compared with the essentially non-existent continuing education programs of the other library organizations. Because the courses were well received, and because the survey of members (reported in Chapter V) indicated that members received more organizational support to attend professional meetings than separate continuing education courses the decision was made to expand and build upon the existing program.

It should be clearly recognized, however, that it was not simply more of the same. The courses were critically evaluated for their subject content and, more significantly, educational structure. Since the existing time length of courses was already well received, and the one-day preference by health sciences librarians had been reported in an independent study (5, p. 322) where possible the new courses were broken into one-day units.

Both existing and new courses were formatted to provide:

1. specific descriptions of course content
2. statement of pre-requisites and target audience
3. educational objectives stated in measurable terms -- by the end of this course participants will be able to - - -

4. pre-tests where appropriate

5. post-tests to evaluate whether the objectives were reached

6. substantive course syllabi, including reading lists and other materials that might be sent to participants for study in advance of the course

7. supplementary classroom aids to be available to instructors in teaching the courses.

In 1972 nine current courses were available (11). They are grouped and cross-listed by subject below:

Introductory

CE 4 General biomedical reference tools (introductory)

Reference

CE 4 General biomedical reference tools (introductory)

CE 8 Literature of dentistry

CE 9 Materials for the history of the health sciences

CE 15 Literature of nursing

On-line Systems

Administration

CE 2 Implications of machines in medical libraries

CE 5 Human factors in library administration

CE 14 Planning health sciences libraries

CE 13 Grant applications and management

Cataloging and Classification

Audiovisuals

CE 16 Management of media (introductory)

Other

By 1975 25 courses had been revised, developed, or were in the production stages. Courses are cross-listed by subject and ordered by level. A numeric list of courses with course descriptions is included as Appendix C to this chapter.

Introductory

CE 4 General biomedical reference tools

CE 11 Inter-library loan (introductory half-day course)

Reference

CE 4 General biomedical reference tools (introductory)

CE 8 Literature of dentistry

CE 9 Materials for the history of the health sciences

CE 10 Literature of pharmacy

CE 15 Literature of nursing

CE 12 Indexing and abstracting services in the biomedical sciences

CE 20 MEDLINE and the health sciences librarian

CE 34 Biological Abstracts - Bioresearch Index

CE 28 Management of reference services

On-line Systems

CE 20 MEDLINE and the health sciences librarian

CE 34 Biological Abstracts - Bioresearch Index

CE 35 OCLC utilization in health sciences libraries

Administration

CE 5 Human factors in library administration

CE 14 Planning health sciences libraries

CE 29 Hospital library management

CE 28 Management of reference services

CE 22 Planning hospital library facilities

CE 13 Grant applications and management

CE 18 Systems analysis

CE 19 Application of operations research to library decision making -- 2 day course

Cataloging and Classification

CE 24 MeSH and NLM classification

CE 23 Problems in medical cataloging and classification

CE 34 OCLC utilization in health sciences libraries

Audiovisuals

CE 16 Management of media (introductory)

CE 30 Basic media management -- hardware and physical facilities

CE 31 Basic media management -- software

Other

CE 17 Preservation of library materials

CE 26 Teaching skills for library educators -- 2 day course

It can be seen that a structure for developing new courses had firmly been established and that the courses were beginning to be developed with specific target audiences in mind e.g. hospital librarians, medical school librarians, library school educators. However, with the exception of CE 11 -- Interlibrary loan and CE 4 -- General biomedical reference tools, there are still few offerings for the untrained.

While developing a more varied and stronger continuing education program for those people attending the Annual meeting, there were still many people who were not able to attend the meeting and were therefore not reached. In order to bring the programs to these people a strong drive was made to encourage local groups, library schools, university extension divisions, other library associations as well as more of the regional groups of MLA to sponsor the courses.

Figure 2 shows the growth in the number of courses presented in local areas.

FIGURE 2

LOCAL PRESENTATIONS OF CONTINUING EDUCATION PROGRAMS

	Number of Courses	Number of Geographic Locations	Different Types of Sponsors	Number of Registrants
1972	11	5	1	239
1975	32	14	3	570

In circumstances when it is desirable to present a large body of information at one time, or to provide an experience which requires intensive, reinforcing interaction, a residential institute provides a preferred learning environment. The experience may be viewed as more expensive if it is not held in conjunction with a professional meeting, but under the circumstances described above it may be the only way of accomplishing the objectives of the institute.

Two types of institutes of this nature were planned during the project. None had previously been held by the Association (a 5 day institute had been held in Denver in 1968 but this consisted of each of the one-day courses being offered on consecutive days with the costs being underwritten by the National Library of Medicine). One institute was offered twice during the project period, the other later in 1975.

The first institute was aimed at library administrators; registrants came from medical school, hospital, and special libraries. The objective of the institute was to demonstrate management and marketing skills and concepts, taught by consultants in those areas, and adapt them to library situations. Although the objectives of the institute were met, it appeared that within medical librarianship there was not a large enough number of people who could, or would, spend four days at a continuing education program that was quite expensive by the Medical Library Association's standards (yet inexpensive by others -- the tuition was $125 for MLA members, $155 for non-members). The content of the program

was equally applicable to academic and special librarians, but because it was sponsored by MLA, much of the target audience did not consider its relevance. This let to the realization that in order to make the special institutes cost/effective, it would probably be useful to co-sponsor them with other relevant organizations.

The second type of institute was aimed at hospital librarians -- those already with an MLA or its equivalent. This institute was co-sponsored with the American Hospital Association and in cooperation with the Catholic Hospital Association and the New England Regional Group of MLA. Our earlier surmise regarding co-sponsorship proved to be correct in this instance and the institute was a resounding success with respect both to meeting its objectives and being financially successful. This experience leads us to believe that the smaller, more intensive and expensive institutes must be co-sponsored in order to draw from a large base to attract a sufficient number of participants.

During the program development stages of both the Institutes and the one and two-day courses, records were kept on the amount of staff time required to work with course designers and, in the case of the Institutes, the speakers. This also included time spent preparing case studies and exercises for non-library faculty. The amount of time that was required for each type of continuing education program demonstrated that formal continuing education courses are relatively expensive to produce. This is

particularly so when the number of participants is limited in order to involve participants actively in the learning process.

When volunteers are used to plan or administer continuing education activities the true costs of developing and operating programs are often not realized. Any continuing education activity that is directed at small groups or individuals, and requires instructor feedback, will be expensive. Home study programming, where feedback is needed at a one-to-one level, is perhaps the most extreme example. The cost of continuing education programming cannot be glossed over.

There is also a large potential for courses in more flexible formats e.g. one day a weekend for ten weeks in cooperation with community colleges.

Home Study Programs

For many library staffs, particularly those in one or two person libraries, it is not possible to attend programs that are held either during working hours or away from the area in which they live. For these people more flexible individualized programs of study are needed. This had long been recognized but no concrete steps to deal with the need were initiated until 1973 when an effort was made to identify existing relevant programs and plan what would be done in this area as resources (primarily financial in the form of staff time) became available.

General programs in a variety of administrative and management areas were identified, such as the cassette/workbook

programs of the American Management Association and a plethora of training companies. Correspondence courses on general and school librarianship offered through some university extension programs were identified but the courses often had little relationship to on-the-job needs of health sciences library personnel. A number of programmed texts and workbook/cassette programs were found to be available on the topic of medical terminology.

The way in which the Medical Library Association decided to make a start in home study programming was in the upgrading of the work materials and syllabi which accompany its continuing education courses. The Continuing Education Committee and the Division of Education

1) have begun the sale of course syllabi and workbooks independently of the courses
2) are investigating the development of additional supporting materials and assessment tools which would enable participants to obtain and be given credit for individual continuing education activities in their home settings
3) are investigating the development of cassette/workbook programs specifically in the area of health sciences librarianship. These will build on materials already developed in the MLA continuing education program.

Once the competencies being tested for in the new MLA certification program have been identified (mid 1977 for the professional

level and 1978 for the technician level; the area of highest priority in continuing education will be the development of instructional materials to assist individuals in acquiring these competencies. In the meantime, work will continue in the directions outlined above.

Support Materials

In 1972 no support materials for continuing education programming had been developed. The purpose of developing materials was to assist local groups of library personnel and library schools in developing continuing education programs in their own areas. Two kinds of materials have now been, and continue to be, focused on by MLA.

The development of self-contained instructional modules that could be used as part of continuing education programs or in library school courses was determined to be a desirable objective. During the grant period a contract proposal was submitted. The proposal identified areas which are thought to be most suited to the effective development of modules. Topics were chosen on the basis of there being a widespread need in that area, and on the availability of qualified people who could spend three weeks at the National Medical Audiovisual Center developing the modules. The outcome of the proposal has not yet been decided upon.

A second type of support for local groups has been the development of materials helpful in designing and administering

continuing education programs. The basics of course design are covered in Working Paper No. 2, A Guide for Planning and Teaching Continuing Education Courses, developed under this present grant, and described more fully in section 5. Three additional resource documents discuss the mechanics of developing and administering continuing education programs (6-8).

5. Methods for Developing Programs

Section three of this chapter has compared the ways in which content areas for continuing education programming were chosen prior to 1973 and by the end of this project period.

Once a topic had been selected, in the pre-1973 period, a course developer was chosen and given the following directions:

1) the subject area of the course.
2) provide camera ready copy.
3) leave $1\frac{1}{2}$ inch margins.
4) the course is to be one day long.

No honorarium was paid course designers, and the end products were well received by course participants, whose expectations of continuing education programming were not as high as today's participants. As continuing education has become more widespread, participants have become increasingly sophisticated and demanding in their expectations. Perhaps because the course designer was giving freely of his/her time in developing the course and materials, there were sometimes difficulties in keeping designers to completion schedules. It was also difficult to ask them to revise or rework parts of the course, when it

was being done out of the goodness of their hearts.

In order to both improve the quality of the courses and to coordinate and systematize the increasing number of courses being developed, procedures were established during 1974 and 1975 which placed major responsibility for the development of courses with individually appointed continuing education course liaisons from the Continuing Education Committee and Division of Education Staff. Overall coordination of program development was assigned to the Chairman of the Continuing Education Committee. Development of new and revised programs is now handled in the following manner.

A Continuing Education Course Liaison is assigned responsibility for acting as a liaison between the course designer and the Medical Library Association. The Continuing Education Liaison assists the designer in the mechanics of the course design, providing a series of review points for the course designer.

A "Letter of Agreement" between the course designer and the Association is used (a copy is attached as Appendix D). The Letter of Agreement spells out the end product that is expected from the course designer, and covers items such as:

A. An indication of the target audience for whom the program is being designed.

B. A statement of course objectives in terms of the skills or knowledge that a participant may expect to have at the completion of the course.

C. The length of the course.

D. A syllabus or workbook to be used by the participant during the course and to be retained for future reference. The syllabus also includes a bibliography and suggested time schedule for the various elements or segments of the course.

E. Reading lists or other materials which should be sent to the participants in advance of the course, and any materials which will be distributed as handouts during the course.

F. A summary of suggestions for instructors: e.g. should the syllabus be mailed in advance, special classroom arrangements or facilities, models to be used, copies of slides or overhead transpariencies.

G. A post-test which will be used to determine whether participants achieved the course objectives.

H. A statement of prerequisites for course registrants.

The "Letter of Agreement" also spells out honoraria, time schedules for the review and completion of various stages of the product, and other paperwork requirements. The course liaison person's name and address is given with a note that that individual will handle any questions, monitor the progress of the work, and keep in touch.

To assist designers further, a copy of the publication A Guide for Planning and Teaching Continuing Education Courses (described earlier) is mailed to new course designers. Course liaisons may consult with educational consultants and subject content people to provide feedback to the designer and in the evaluation of the final product.

The following checklist summarizes a possible sequence of

steps Continuing Education Course Liaisons may follow:

1. General subject content area of course identified by the Continuing Education Committee.

2. Possible course designers identified by the Committee and ranked.

3. Course Liaison appointed.

4. Course liaison contacts first choice course designer and they begin the process of developing the course.

5. The course liaison sends the course designer:

   a. a sample copy of the "Letter of Agreement"

   b. a copy of Washtien, A Guide for Planning and Teaching Continuing Education Courses, if necessary.

   c. a copy of this document spelling out the Continuing Education Course Liaison's responsibilities, or a letter incorporating the pertinent points from this document.

6. The course liaison notifies the Chairman of the Continuing Education Committee to send the formal copy of the "Letter of Agreement." A copy of the signed agreement is sent to the Division of Education.

7. The course designer sends the course liaison and the MIA Director of Education a brief (one paragraph) course description, including the target audience, any prerequisites for the course, and a list of objectives. Where possible, these objectives are measurable and reflect what the participants will be able to do at the end of the course. The objectives are reviewed by the course liaison and the Division of Education and may need to be re-worked. The course designer and the course liaison may obtain consultation with education specialists within their own institutions.

8. The course designer prepares a draft of the syllabus to be used by the instructor and the participants. This draft is sent to the course liaison and the Director of Education.

   The course liaison may ask a second subject specialist to read the draft for clarity and accuracy. Other considerations kept in mind are:

   1) Will the material enable participants to accomplish the stated objectives?

   2) Is the text grammatical and clear? Are there spelling errors?

   3) Are any illustrations, plans, or tabular materials clear and well prepared (MIA does not do art-work).

   4) Are the preliminary pages in "MIA format" (examples are given). The Division of Education provides the logo, but the rest of the material is supplied by the course designer.

   Since some revisions are usually necessary, the course designer is cautioned to be prepared for the draft to require re-typing, and also to allow plenty of time for the mails back and forth, and for the re-typing.

9. A post-test is developed by the course designer to assess the extent to which the course objectives were met by participants. It tests for a knowledge of the course material, not attitudes towards it. This may or may not be formally administered, but is useful to the participants. A pre-test is optional.

10. Copies of any materials which would be used in teaching the course, but not included in the syllabus, e.g. slides, transparencies, handouts, are prepared by the course designer.

11. A list of suggestions for instructors teaching the course, e.g. items included under F earlier in this paper, is developed by the course designer.

12. When the final draft of all the materials listed in 8-11 are accepted by the course liaison and the Division of Education, the materials are put into camera ready copy by the course designer unless other arrangements are agreed upon in advance.

    The camera ready copy is sent to the course liaison who checks to make sure that everything is in final form for printing. The course liaison then forwards the materials to the Division of Education for printing. Clear instructions are needed as to what handouts, if any, are NOT to be bound in with the syllabus, whether handouts should be collated in advance, etc.

13. When all items developed for the course are received by the Division of Education, it arranges for payment to be made to the course designer.

14. The course liaison has responsibility for trying to ensure that the course designer adheres to schedules and submits all contracted materials.

15. The course designer is sent two copies of the completed syllabus as a courtesy.

16. Two copies are sent to the MIA Archives.

17. It is usually desirable for course designers to teach the course the first time it is offered. They may also be asked to teach at regional presentations in their area at other times in the future. A pool of instructors is maintained so course designers will not always be asked to teach.

6. Identifying, Training, and Evaluating Instructors

In most instances the first time a new course is offered, the course designer is given the opportunity to teach it. If the course is in heavy demand and more than one section is to be offered the first time it is taught, and as the demand for local presentations increases, additional instructors are needed. New instructors are

selected primarily by the consensus of the Director of Education and the course designer or Continuing Education Committee Chairman. Candidates may be recommended by leaders in the field with particular expertise in the subject area of the course, by former participants in the course (a question on the course evaluation form is "Do you know the name of another person whom you think would be a good instructor for this course?"), or by individuals applying. No instructor is used without checking out his/her credentials, experience, and public speaking or teaching effectiveness. Once a person has been used as an instructor in the program a file is maintained on the person's class evaluations and is used to consider if the person will be invited to teach again. It is from such a pool of qualified individuals that instructors are chosen. In order to obtain a qualified person, the Association will use instructors from any part of the country if necessary (travel expenses are paid).

In evaluating some of the early continuing education courses developed by the Medical Library Association, Estelle Brodman wrote:

> As might be expected, some instructors turned out to be excellent teachers with well-planned, logical presentations; others were not. Some classes were lectures or monologs, others were discussions, and still others worked set problems cooperatively ... The main complaint, however, had to do with the frenetic quality of the day: the attempt to crowd too much in too short a time (9).

While the program continued to grow, the evaluations from the course presentations showed that MLA courses varied in both the quality of

design and according to the ability of the individual subject experts to teach what was in the course package. Steps taken to improve the course design have been described in the previous section.

MLA instructors have most often been people with great subject competence, practitioners in the library field, but with few skills in teaching or curriculum design. As one part of the present project ways were examined in which the teaching effectiveness of these people could be increased. We wanted to focus on principles which could be put into effect in planning and teaching continuing education courses. It was not thought that there was any one "right" way to teach. It was recognized that many different approaches and methods can lead to good results. We had to develop something that would be useful to people who could not afford to attend courses on "how to design courses" or "how to teach" -- nor could the Association afford to pay them to attend. An unsuccessful attempt was made to obtain grant funding for a series of workshops.

Given the constraints under which we were working, it was finally decided to develop a printed Guide to Planning and Teaching Continuing Education Courses. This publication is submitted with this report as Working Paper No. 2. Its usefulness is indicated by the fact that nearly all 300 copies printed were exhausted and it has since been republished by CLENE (Continuing Library Education Network and Exchange).

The purpose of the guide was to suggest how educational

principles could be applied in developing and teaching continuing education courses.

It was recognized that many good books had been written about these principles, and references to them were included in the bibliography, since the Guide could touch only lightly on the various aspects of teaching. The Guide serves as an introduction, an outline that the reader can fill in and expand through study and experience.

The Guide is divided into three main parts -- a checklist, text, and appendix. The checklist covers the factors to be considered in planning and teaching continuing education courses. The text discusses these factors briefly, presents applicable principles, recommends action to be taken and lists pertinent references. The appendix includes copies of some MLA Continuing Education program form letters as well as samples of materials used in various courses. The Table of Contents gives a clear description of the scope of the work (Figure 3).

Not all factors included apply to all courses and all conditions, but they are included so that they will not be overlooked when they do apply. The advice that applies to every part of the Guide is that the Guide is not a step-by-step book of recipes. It is up to the individual to determine how best to adapt the suggestions in the Guide to achieve student learning and teacher satisification.

The Guide did not lend itself to be evaluated in a controlled manner. All instructors who taught at the 1975 Annual Meeting of the Medical Library Association were sent copies of it to review prior

FIGURE 3

TABLE OF CONTENTS OF THE GUIDE

		Page
	Checklist for Planning and Teaching	1
	Principles and Practices	5
I.	Responsibilities	7
II.	Determining the Scope of a Course	8
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to the meeting with the suggestion that they might find it a useful framework in which to think about the courses they would be teaching. After the meeting they were questioned on its usefulness and asked for suggestions on improving it. Many of the instructors were excited by the publication and indicated that they planned to use it for other purposes, e.g. in reviewing library school curricula and designing their own workshops.

The instructor of the two-day program on Teaching Methods for Library Educators requested permission to use it as the syllabus for her course which was in the final design stages. At a staff level it was found to be a useful tool for educating new members of the Continuing Education Committee and for evaluating new courses that are being designed.

The Continuing Education Committee used the Guide in upgrading its own knowledge in this area, and has subsequently reviewed program offerings in the light of the principles outlined. A result of this is seen in the move away from general course descriptions to more specific sets of desired outcomes and objectives for each course. The Committee has developed its more rigorous letter of agreement with course designers, requiring that all new and revised courses contain course objectives and formative and summative testing.

At a staff level certain parts of the Guide were expanded as a need was felt either by our users, the Committee, or within Headquarters. For example, the section that relates to "Responsibilities" -- the who does what and when has been expanded. The Guide was published

in a loose leaf form expressly for this reason, so that other groups using the Guide might add to, revise, or delete sections as appropriate to their organization. We have happily shared copies of the Guide with other associations, organizations, library schools or educators, and have been told that it has been useful in developing and strengthening their programs.

A second avenue for training continuing education instructors has been the development of a two-day continuing education course on Teaching Methods for Library Educators. The effect of this on instructors in the MLA continuing education program has been somewhat indirect for two reasons. Participants take the course at their own expense -- the tuition is $60 for MLA members and $90 for non-members. The second reason is somewhat ironic. The course, until 1976, was offered only at the Annual Meeting, at the very time that many of the MLA instructors were themselves teaching the MLA continuing education courses. Nevertheless, a number of the registrants to date have been MLA instructors and the situation will improve in the near future. The course has been scheduled for four local presentations already in 1977 in addition to its being taught at the Annual Meeting and a proposal is being presented to the MLA Board of Directors that the course be repeated at the conclusion of the Annual Meeting and offered at a reduced fee to MLA continuing education course instructors.

In order to assist instructors in preparing for courses, and to encourage course participants to think about their objectives in registering, continuing education course participants at the Annual

Meeting are required to complete background sheets which are then forwarded to the instructors. An example of the form letter used is given in Appendix E.

Each course that is conducted by the Medical Library Association is evaluated. Prior to 1974 a lenghty (5 page) form was given to all participants. An understandably low response rate was obtained and many of the questions were open ended, making tabulations difficult. Consequently, only those questions which yielded useful data were tabulated, and then infrequently.

In 1974 a new evaluation form (to be discussed more fully in the next section) was developed. It has had minor revisions since then, but is essentially a simple check-off type questionnaire. Questions are asked on the perceived effectiveness of the instructors. Attention is given to finding out not only the extent to which a participant has met the course objectives, but also if the objectives were met efficiently. For example, it is not desirable to have participants be able to write measurable objectives if that skill took eight hours to teach, if a more effective instructor or course design could have taught it in two hours.

Records on instructors' performance are maintained in the Division of Education, which has the responsibility of assigning course instructors. Only those individuals who consistently receive above average ratings are kept in the pool of active course instructors.

7. The Mechanics of Conducting Programs

In conducting continuing education programs the Medical Library Association deals with two types of situations.

(1) All arrangements, including location and registration, are handled by MLA staff.

(2) Another organization or regional group of MLA is sponsoring a MLA continuing education course or courses.

Obviously, MLA has much more control over events in the first instance, although the program has now been structured so that local groups can take advantage of the expertise gained from conducting many courses.

When a request is received from a sponsoring group a qualified instructor is chosen from the "pool" of instructors, described in the previous section. A letter is mailed to the instructor confirming the name of the course to be taught, the date and location. The name, address, and telephone number of the person acting as the local contact for the group is included. The financial arrangements are spelled out and the instructor is requested to let the local contact know of any special requirements that are needed for teaching the course. To remind the instructor, and to be of assistance to the local contact, a form is attached for the instructor to mail to the local contact specifying room set up, audiovisuals, and other requirements (e.g. bibliographic tools). Copies of the instructor form letter (Appendix F) and the requirements form (Appendix G) are included at the end of this chapter. If the instructor is teaching the course for the first

time he/she is sent a copy of the course syllabus, a copy of the Washtien Guide, the instructor's manual for the course, and any models, games, or audiovisual aids that have been developed for the course.

The local contact is sent information specifying the agreement between the local group and MLA (Appendix H). An accompanying letter reinforces the fact that the instructor may require a specific room set up, and explains how course evaluations and certificates of attendance are handled (Appendix I).

All classroom materials, including evaluation forms and certificates of attendance are shipped from the MLA Headquarters to the local contact or some other pre-arranged destination. At the conclusion of the course completed evaluation forms and unused certificates of attendance and class materials are mailed back to the Medical Library Association, as are the course participants' cheques. Because MLA awards Continuing Education Units, social security information for registrants is collected.

When the evaluation forms are returned to the Division of Education the results are tabulated and the relevant pieces of information recorded, mailed to the instructor, or forwarded to the Continuing Education Committee as appropriate. The current evaluation form is included as Appendix J.

All instructor expenses, including accommodations and an honorarium, are handled by the Medical Library Association. A permanent record is maintained at MLA Headquarters of all persons participating in the MLA continuing education programs, whether

sponsored by MLA or some other group. Courses to date have been sponsored at the local level not only by MLA regional groups but also by library schools, interested groups of librarians, and local chapters of the American Society for Information Science and the Special Libraries Association.

8. Quality Control

In order to produce continuing education programs that are a consistent specified standard, quality control has been built-in at every step of the MLA continuing education course design. Mechanisms for quality control are spelled out and developed before a new program is begun. By providing checks along the way, and using the feedback to modify the end product where necessary, the Medical Library Association has been able to develop a quality program with limited resources. We feel the importance of quality control cannot be overemphasized when resources are limited. The systematic application of quality control throughout the educational process will allow the best products to continue to be developed by optimally using the resources available (7).

FOOTNOTES

1. Rothenberg, L, Rees, A.M. and Kronick, D.A. "An investigation of the educational needs of health sciences library manpower, IV. Characteristics of manpower in health sciences libraries." Bulletin of the M.L.A. 59:31-40 (January) 1971.

2. Fink, C.D. A Forcast of Events and Conditions that Might Affect Job and Training Requirements for Medical Librarians. Alexandria, Virginia: HumRRo, 1973. Technical Report 73-30, HumRRo-TR-73-30.

3. Stone, E.W., Patrick, R.J. and Conroy, B. Continuing Library and Information Science Education. Final Report to N.C.L.I.S. Washington, D.C.: American Society for Information Science, 1974.

4. Swanson, R.S. and Johns, C.J. "Some highlight findings of the ASIS membership survey" SIG/ED Newsletter No. ED-76-1, 9-10 (January) 1976.

5. Chen, C.C. "An investigation of the continuing education needs of New England health sciences librarians." Bulletin of the M.L.A. 64:322-24 (July) 1976.

6. Virgo, J.A. "Continuing education programming for medical librarians -- an overview." In Proceedings of the HEA Title II-B Institute on Continuing Education Program Planning for Library Staffs in the Southwest, March 17-28, 1975. Baton Rouge: LSU, 1975. pp 59-68.

7. Virgo, J.A. Quality Control in Professional Continuing Education: A Model. Invited paper presented to the Association of American Library Schools, January, 1976.

8. Medical Library Association. Division of Education. Responsibilities of Continuing Education Course Liaisons. Unpublished paper. 16 p. 1976.

9. Brodman, E., "The Medical Library Association's experience with continuing education," in Proceedings of the Third International Congress in Medical Librarianship, Amsterdam, May 5-9, 1969. Amsterdam: Excerpta Medica, 1970. p.305.

10. Continuing Education Committee Report 1974/75. Bulletin of the Medical Library Association. 64: 113-4. (January) 1976.

11. "Continuing Education Courses." Bulletin of the Medical Library Association. 61:98 (January) 1973.

APPENDICES

A. Continuing education clearinghouse listings

B. Innovative roles series

C. List of courses and descriptions

D. Letter of agreement for course designers

E. Form used by continuing education registrants

F. Instructor form letter

G. Room set-up form

H. Information on local presentation of continuing education courses 1975/76

I. Local contact form letter

J. Evaluation form

APPENDIX A

CONTINUING EDUCATION OPPORTUNITIES AVAILABLE

CONTINUING EDUCATION OPPORTUNITIES AVAILABLE--The following continuing education activities have been listed with the Medical Library Association's Continuing Education Clearinghouse. If your organization is sponsoring any activity which you think might be of interest to MLA members, please send us the pertinent details.

MLA developed courses are listed first. The fee for MLA one-day courses is $30 for members and $45 for non-members, unless otherwise stated. Course descriptions for all MLA courses were listed in the August/September 1975 issue of the MLA NEWS. Complete course descriptions for non-MLA courses are given only the first time they are included in the MLA NEWS. You are encouraged to save and refer to back issues for complete course descriptions.

For up-to-date information on continuing education opportunities, call the Medical Library Association at (312) 266-2456 and ask for the Division of Education. In many instances course registration is limited. Early registration is always preferable.

*****

MARCH

TITLE: Microforms
DATE: March 8-11, 1976
SPONSOR: School of Library Science
University of Oklahoma
LOCATION: Norman, Oklahoma
CONTACT: School of Library Science
University of Oklahoma
Off Campus Classes
1700 ASP
Norman, OK 73069

*****

TITLE: Supervision 1976: A Two Day Seminar 806.1
DATE: March 9-10, 1976
FEE: $95
SPONSOR: University of California Extension, Santa Barbara
LOCATION: Program Lounge
University Center
University of California, Santa Barbara
DESCRIPTION: An intensive seminar which will provide the supervisor with practical knowledge which can immediately be used on the job. Intended as an update for the experienced supervisor as well as an introduction to those new in the field. Topics include: philosophy of supervision, time management, decision-making, delegation, performance evaluation, a review of recent court decisions affecting supervisors. Registration deadline is March 3, 1976.
CONTACT: University of California Extension
Santa Barbara, CA 93106

*****

TITLE: Improving Communication Skills
DATE: March 10-11, 1976
FEE: $75
SPONSOR: Univ. of Wisconsin-Extension
LOCATION: Madison, Wisconsin
DESCRIPTION: Many organizational problems can be traced to ineffective communication which in turn can reflect both a lack of skill in the art and science of communication as well as a style of interpersonal relations which make effective communication difficult. This program will examine the process of communication, the basic ingredients of effective communication, barriers to effective communication and specific communication techniques involved in improving interviews, meetings and presentations. There will be opportunity to demonstrate and practice some of these techniques and skills.
CONTACT: David Schrieber
(608)263-3473

*****

TITLE: Processing & Automation at the Library of Congress
DATE: March 10-12, 1976
SPONSOR: ALA/ISAD
LOCATION: Washington, D.C.
DESCRIPTION: The institute has been designed to inform participants of the activities, operations and future plans of the LC Processing Department and its many functions. Among the topics to be covered will be the Order Division, the National Bibliographic Service, the Automated Process Information File, the cataloging system, the authority system, COMARC, CONSER, the Cataloging Distribution Service, and the MARC input story. The first day, March 10, will be devoted to tours of the Processing Department of the Library of Congress and the other two days will consist of institute sessions with LC staff members as speakers.
CONTACT: Don Hammer
ALA/ISAD
50 E. Huron
Chicago, IL 60611
312/944-6780

*****

TITLE: Management by Objectives
DATE: March 10-12, 1976
FEE: $300
SPONSOR: Georgia Institute of Technology
LOCATION: Atlanta, Georgia
DESCRIPTION: This course is designed to help participants develop an understanding of and capability in applying management by objectives technology to achieve higher levels of organization performance and individual satisfaction. The approach is to develop management by objectives as a part of a total philosophy of management.
CONTACT: Director
Department of Continuing Ed.
Georgia Institute of Technology
Atlanta, GA 30332

*****

TITLE: Library Personnel: Your Most Important Resource
DATE: March 11, 1976
SPONSOR: University of Kentucky College of Library Science
LOCATION: Lexington, KY
DESCRIPTION: Margaret Myers, Director of ALA's Office for Library Personnel Resources, speaks on placement, women in management, in-service training, and discrimination.
CONTACT: College of Library Science
University of Kentucky
Lexington, KY 40506

*****

TITLE: C.E. 18: Systems Analysis 3/11/75
C.E. 8: A Review of the Literature of Dentistry 3/12/75
C.E. 13: Grant Applications & Management 3/12/75
C.E. 23: Problems in Medical Cataloging and Classification 3/12/75
DATE: March 11 & 12, 1975
FEE: $30 MLA members
$45 non-members
SPONSOR: Philadelphia Regional Group
LOCATION: Philadelphia, PA
DESCRIPTION: See August/September 1975 issue of the NEWS.
CONTACT: Helen Ross, Medical Staff Library
Wilmington Medical Center
Wilmington, DE 19899

*****

TITLE: Management by Objectives for Librarians
DATE: March 12-13, 1976
SPONSOR: University of Oklahoma
LOCATION: Norman, Oklahoma
CONTACT: School of Library Science
Off Campus Classes
University of Oklahoma
1700 ASP
Norman, OK 73069

*****

TITLE: Instructional Development Training Seminars for Teachers of Library and Information Science
DATE: March 12-15, Portland, OR
April 9-12, Chicago, IL
SPONSOR: Center for the Study of Information and Education, Syracuse University
LOCATION: Portland, Oregon
Chicago, Illinois
DESCRIPTION: To assist teachers to develop competence in the design, development and field testing of instructional modules. Enrollment limited to people involved in teaching of library personnel--at least 50% of their time must be spent in teaching activities.
CONTACT: Don Ely
CSIE
Syracuse University
130 Huntington Hall
Syracuse, NY 13210

*****

APRIL

TITLE: Information Broker/Free Lance Librarian: New Careers, New Library Services
DATE: April 3, 1976
SPONSOR: School of Information Studies, Syracuse University
LOCATION: Syracuse, New York
DESCRIPTION: Designed for all interested in new directions in library and information services--professional or student, educator or administrator, employed or unemployed. Purposes are to: identify alternative information services now being offered to the public; understand how to identify the need for new roles and careers; learn how to develop them outside or within existing systems; discuss relationship between these new

APPENDIX B

NEW ROLES FOR HEALTH SCIENCES LIBRARIANS—5

COMMUNITY OUTREACH PROGRAM

The University of Southern California School of Medicine has a very active office of Minority Affairs. Throughout the year this office conducts activities aimed at attracting young minority students from high schools and colleges in the Los Angeles area to careers in the health sciences. The High School Cluster Program conducted this summer involved approximately two hundred students. Half of these students worked in the LA County/ USC Medical Center gaining experience in a hospital environment, while the other half of the students attended a variety of courses designed to advance their study skills. Clyde Harris, Coordinator of the Cluster Program,described the summer activities during an informal conversation and the media specialist at the Norris Medical Library, Elaine P. Adams, suggested to him that the library's media services division might have a contribution to make to the program. The division would arrange a series of film programs supporting the basic sciences introductory course.

The Cluster Program series lasted eight weeks. The Cluster Program administrators divided the one hundred students into small groups and assigned Vincent Reyes, a college student and counselor with the program, as course leader. The Library's media services division arranged for six group visits each week in the conference room and supplied the equipment and the film programming. Additionally, the division offered the services of the media specialist who had had experience as a high school instructor and was able to share with the course leader responsibility for guiding disscussion.

The media programs in the Norris Medical Library media collection were geared to medical students and professionals in the health sciences. The content was often too advanced for eleventh and twelfth graders. Therefore, the program relied heavily on films available from the film collection of the Los Angeles City Public Library. Two films were shown each week, with three showings per film. Among the titles utilized were:

The Perfect Drug Film (narcotics)
Slow Guillotine (pollution)
Your Amazing Mind (mind functions)
Tell Me Where to Turn (information and refferal centers)
The Hurdler (biography of Charles Drew)
Abortion: Dondon's Dilemma (abortion)
How Life Begins (childbirth)

This gives you a sampling of the subject matter that was covered.

The library's involvement in terms of staff consisted of the media specialist's time:

4 hours--Initial Planning
5 hours (each week)--Previewing the week's films; developing discussion approaches with the counselor; participating in program interaction with the students (the media specialist was not present continuously throughout each visit). 44 hours total.

There are plans to continue the film program next year. Dr. Adams would like to conduct a brief in-service for the counselors on how to utilize instructional media and encourage classroom discussion. It was found that course counselors in other subjects, such as English were interested in employing media in their presentations. Dr. Adams would like also to see students fulfill assignments developed from the content of the films and an evaluation system set up to determine how much students benefitted from the programs. She writes "It was a very rewarding experience for me and I encourage other librarians to engage in similar activities."

For further information on this program contact: Elaine P. Adams, Ph.D.
Media Specialist
Norris Medical Library
University of Southern California
2025 Zonal Avenue
Los Angeles, CA 90033

APPENDIX C

DESCRIPTION OF ONE AND TWO DAY COURSES

CE 4: GENERAL BIOMEDICAL REFERENCE TOOLS

An introductory course intended for personnel with limited training or experience. Basic reference works common to many health science libraries are examined. Coverage includes an introduction to: Index Medicus, Abridged Index Medicus, Hospital Literature Index, International Nursing Index, Index to Dental Literature, various directories and specific reference works such as the Dictionary of Medical Syndromes, etc. .7 CEU

CE 5: HUMAN FACTORS IN LIBRARY ADMINISTRATION

Geared toward the person with supervisory responsibilities, this course attempts to study personnel management in terms of interpersonal relationships. Topics covered include: employee motivation, techniques of resolving conflict situations, discussion of active listening, and the analysis of different styles of leadership. Using techniques of case study, role playing, and small group discussions, problem-solving approaches are illustrated. .7 CEU

CE 8: A REVIEW OF THE LITERATURE OF DENTISTRY

This introductory course familiarizes the student with the basic reference sources and related search techniques necessary in answering reference questions in dentistry. Through a series of problems, the student has the opportunity to use the various tools which are discussed and to develop his information finding techniques. .7 CEU

CE 9: MATERIALS FOR THE HISTORY OF THE HEALTH SCIENCES

This course is designed to provide the student with an awareness of the variety of materials any retrospective collection might include and an awareness of some problems in their care and processing. Appropriate reference sources will be discussed and evaluated. The syllabus has been completely revised and updated, and the scope of the course has been expanded to include all the health sciences. .7 CEU

CE 10: RECENT ADVANCES IN THE LITERATURE OF PHARMACY

Problem areas in the location of pharmaceutical information are studied. Selected standard pharmacy reference tools are covered, emphasizing drug nomenclature and product information, business and statistical information relating to the pharmaceutical industry, and the availability and use of various directories. A series of problems gives the student didactic experience in dealing with complexities of pharmaceutical reference queries. .7 CEU

CE 11: INTERLIBRARY LOAN (½ DAY)

The course is designed for individuals with limited or no prior experience in this area of library work. Correct procedures for completion and submission of an ALA Interlibrary Loan Request Form will be emphasized. Bibliographic tools for verifying and locating desired material will be described and evaluated. .4 CEU

CE 12: INDEXING AND ABSTRACTING SERVICES IN THE BIOMEDICAL SCIENCES

An introductory course for persons with limited or no experience in the use of Biological Abstracts, Chemical Abstracts, Excerpta Medica and Science Citation Index. Publication coverage, subject scope, indexing and abstracting policy are viewed in relationship to effective retrieval from these publications. Questions of when, why and how to use the indexes are discussed. Case studies of varied difficulty will permit students to become familiar with all sections of the indexes and develop basic skills in their use. Using a problem-solving approach, the class will identify strong points, unique capabilities, similarities, limitations and comparative effectiveness of each publication. The publications will also be considered in relation to their computerized versions and to Index Medicus. .7 CEU

CE 13: GRANT APPLICATIONS AND MANAGEMENT

This introductory course, intended for those individuals responsible for providing library services in health-related institutions, presents basic information about grants and grant management. Topics include: the evaluation of grant support, federal and non-federal grants, requesting funds, contracts and grants management. .7 CEU

CE 14: PLANNING HEALTH SCIENCES LIBRARIES

This course is intended for those actively planning a new library or remodeling an old one. The syllabus has been completely revised and updated, and it includes all phases of planning from early stages through completion. This course is concerned with planning the larger medical library facility, especially medical school libraries. .7 CEU

CE 15: THE LITERATURE OF NURSING

Planned for the person who has had little or no experience with the nursing profession, nursing education, or nursing literature, this course includes a discussion of library needs of the school of nursing and of the graduate nurse, as well as trends in nursing education and some important libraries with whose services nursing librarians should be familiar. The course also includes discussion of acquisitions, reference sources, literature of associations important to nursing, and non-book materials. .7 CEU

CE 16: MANAGEMENT OF MEDIA IN LIBRARIES

Media in libraries is explored from a practical point of view providing the librarian with basic knowledge and considerations to enable planning and implementing media programs in support of medical education. Emphasis is given to organization, handling, cataloging and indexing, and acquisitions. (Librarians who have attended this course at the National Medical Audiovisual Center should not apply for CE 16.) .7 CEU

CE 17: PRESERVATION OF LIBRARY MATERIALS

A course designed to familiarize registrants with basic preservation measures. This course will cover fine binding and the preservation of archival materials, including the special preservation problems encountered in rare book collections and manuscript collections; basic preservation measures will also be considered, including non-book materials. Routine maintenance of modern collections, with emphasis on the care and repair of modern bindings, and a discussion of common preservation problems will be included. .7 CEU

CE 18: SYSTEMS ANALYSIS

This course is intended to introduce uninitiated students to the terminology and concepts employed in the use of systems analysis techniques in the medical library setting. A syllabus will be sent in advance of the course to allow students to work out exercises on a self-study basis. The tutorial session will be devoted to group interactions concerning applications of analytic techniques covered by the syllabus. .7 CEU

CE 19: APPLICATION OF OPERATIONS RESEARCH TO LIBRARY DECISION-MAKING

This is a 2-day mini-course designed specifically for librarians of medium and large health sciences libraries. It is advisable that students who are planning to take this course have already been exposed to the basic concepts of systems analysis. No mathematical background is required although helpful.

First day unit introduces the most basic concepts of probability and statistics and the formation of mathematical models and the general concept of operations research and its application to public systems in various decision making processes. Students will be given opportunities to do actual statistical exercises.

Second day unit deals with the application of operations research techniques in health sciences library settings. Specific models will be introduced and their usefulness to librarians in terms of various administrative decisions will be discussed. Students will be asked to apply some models to their own library situations.

Prerequisite for the course: CE 18 Systems Analysis, or its equivalent. Persons demonstrating evidence of equivalent knowledge as is being presented on the first day may apply for the second day of the course separately. Course fee: $30.00 each day for MLA members; $45.00 each day for non-members. 1.4 CEU

CE 20: MEDLINE AND THE HEALTH SCIENCES LIBRARIAN

MEDLINE, the National Library of Medicine's interactive search system, is currently operational in about three hundred medical libraries. Although additional ones will continue to be added to the MEDLINE network, it is not possible for all those wishing to join to do so. And yet the services of MEDLINE must be made available to all qualified health professionals. The purpose of this course is to explain how MEDLINE works, how its services may be used by all health sciences librarians, and how those librarians

can better serve their vital role as the mediary between the requester and the MEDLINE system. Course participants will be given an opportunity to perform simple MEDLINE searches. Since enrollment must be limited, applications from MEDLINE analysts and other library personnel having access to MEDLINE in their own libraries will not be accepted. .7 CEU

CE 22: PLANNING HOSPITAL LIBRARY FACILITIES

The purpose of this course is to start the hospital librarian on a course of self-education to gain the skills necessary for planning a new or remodeled library. Acquiring self-confidence and finding a power base are emphasized. Methods of gathering and organizing the data and writing a building program are discussed, and each element of the library plan considered. An exercise in reconciling all requirements for space available is done by small groups at the end of class. .7 CEU

CE 23: PROBLEMS IN MEDICAL CATALOGING AND CLASSIFICATION

This is a course for persons with cataloging and classification experience in the NLM Classification. Topics to be covered include: International Standard Bibliographic Description (ISBD); problems with form of entry, cross references, and difficult materials; use of CATLINE; problems with the use of MeSH and NLM Classification; cataloging policies, and the future of NLM and OCLC as sources of cataloging information. Prerequisite: CE 24 or equivalent. .7 CEU

CE 24: MeSH AND NLM CLASSIFICATION

This course is intended to sharpen skills in assigning NLM Classification and Medical Subject Headings (MeSH) to health sciences materials including peripheral areas such as biology, anthropology, and psychology. The MeSH list will be emphasized, but problems in assigning "non-MeSH" terms in conjunction with MeSH and conversion of LC subjects to MeSH will be discussed. Applicable tools for cataloging as well as the many sources of information on cataloging will be presented. MeSH Tree Structures, the Annotated Alphabetic MeSH, and use of the NLM Classification schedules will be stressed. Some emphasis will also be placed on problems encountered by smaller institutions doing original cataloging with minimal resources. At the end of the seminar, participants will be able to assign MeSH headings and NLM Classification numbers to a variety of materials, and be familiar with the basic practices of health sciences cataloging.

CE 26: TEACHING SKILLS FOR LIBRARY EDUCATORS

An overview of basic planning and teaching skills plus introduction to innovative strategies for improving adult learning. The course will include exhibits of new materials, demonstration of methods and personal involvement of registrants. Limited to persons with full or part-time experience in graduate library schools, continuing education courses or in-service training courses. Those preparing to teach such courses will be admitted as space allows. This is a two-day course; fee is $60.00 for MLA members and $90.00 for non-members. 1.4 CEU

CE 28: MANAGEMENT OF REFERENCE SERVICES

The course is designed for reference and administrative librarians and emphasizes the management of reference departments as well as handling reference problems. Discussion will focus on reference policies and philosophies, relationships with users and priorities of service. Participants should bring a copy of the reference policy for their library if they have one. Prerequisite: CE 4 or equivalent. .7 CEU

CE 29: HOSPITAL LIBRARY MANAGEMENT

This course is designed for hospital librarians to increase their awareness of basic management principles and to apply these principles in common work situations. Topics will include: developing objectives, personnel (hiring, firing, and performance evaluation), budget preparation, reporting, relationships with hospital administrators and library committees. Preference will be given to librarians who are currently employed in hospital or clinic libraries. If space permits, individuals from medical school or other libraries, or library consultants, students, etc. will be enrolled. .7 CEU

CE 30: BASIC MEDIA MANAGEMENT--HARDWARE AND PHYSICAL FACILITIES

This course is designed to introduce participants to the physical considerations which accompany the housing of an audiovisual collection. Topics to be covered in lecture will be considerations in designing a proposed facility or redesigning an existing facility in either a hospital or health science center to meet the specialized needs of audiovisual software and equipment, care of AV software, and evaluation of equipment to promote a collection of usable, cost-effective and patron/staff oriented audiovisuals. Activities planned

involve grouping participants from similar facilities to design an AV facility based on considerations discussed in the lecture and examples from other facilities. Individual activities include operating various pieces of equipment and handling various pieces of software. .7 CEU

CE 31: BASIC MEDIA MANAGEMENT--SOFTWARE

This course offers the librarian a variety of solutions to problems usually encountered in developing AV software services in a health sciences library. Acquisitions, budgeting, circulation, packaging, shelving, and allotment of staff time in providing software services are included; reference services, sources of quality health science audiovisuals, and cataloging for optimal use have been given special emphasis. This course also explores policies which are needed in providing AV services in libraries. .7 CEU

CE 34: BIOLOGICAL ABSTRACTS--BIORESEARCH INDEX

This course will provide registrants with an understanding of the BIOSIS data base--printed and machine--as it relates to content, coverage, standards and procedures used in the bibliographic, abstract and index sections. Participants will gain confidence in searching the indexes more effectively, both alone and in combination, gain more experience in setting up strategies for specimen searches and have the knowledge and background information to teach basics of the use of BA and BioI to library users. Bibliography of related reference aids will be provided. The course is aimed at persons already having a basic familiarity with the organization of BA and BioI but wishing to become more proficient in their use. .7 CEU

CE 35: OCLC UTILIZATION IN HEALTH SCIENCES LIBRARIES

This course will teach how to implement OCLC, understand and perform on-line searching, inputing, editing, and tagging, by means of training films, slides, and active learning sessions. This introductory course is intended for participants with no previous experience with OCLC. .7 CEU

APPENDIX D

LETTER OF AGREEMENT BETWEEN COURSE DESIGNERS AND MLA

This Agreement, by and between

_____
name

_____
address

_____
city, state, zip

_____, and
office phone

_____
Chairman, CE Committee

_____
address

_____
city, state, zip

_____, for the
office phone

Medical Library Association, establishes the terms and conditions for the preparation or revision of course work materials for the Medical Library Association Continuing Education course:

_____

_____

_____

ARTICLE I Scope of Work

The final product shall consist of the following:

A. A syllabus or workbook to be used by the participant during the course and to be retained for future reference. The syllabus should include a bibliography and approximate time schedule for the various elements or segments of the course.

B. A statement of course objectives, i.e., the skills or knowledge that a participant may be expected to have at the completion of the course.

C. Reading list or other materials which should be sent to the participants in advance of the course and any materials, such as case studies, which will be distributed as handouts during the course.

D. A summary of suggestions for the instructors; e.g. should syllabus be sent in advance, type of audio-visual equipment needed, special classroom assignments (seating, work surface requirements), etc. If the syllabus does not "stand alone" as a teaching aid, an instructor's manual should also be included in the package.

E. A post-test which the instructor will use to determine whether participants achieved the course objectives.

F. A statement of prerequisites (other C.E. courses, college courses, experience, etc.) needed for course registrants.

ARTICLE II Special Conditions

A. All typewritten material for students and instructors shall be camera-ready copy with 1½ inch margins.

B. The Continuing Education Committee member designated to work with you is:

_____
name

_____
address

_____
city, state, zip

_____
office phone

This individual will answer any questions you have and will periodically contact you with regard to your progress. All material should be forwarded to this liaison person.

C. All materials will become the property of the Medical Library Association which will have irrevocable rights for duplication and distribution.

ARTICLE III Expenses, Honorarium and Completion Dates:

A. Reimbursements for original art work, slide preparation, etc. are possible if required for the syllabus or for effective course presentation, but such expenditures should have advance written approval of your C.E. Committee liaison. Subject specialists, education research departments and other resource people may, of course, be utilized but these services cannot be reimbursed.

B. Following the receipt and acceptance by the committee of materials specified under article I, you will receive an honorarium of $_____.

C. A preliminary statement of course objectives and a course outline should be received by your C.E. Committee liaison by _____. Following review by the C.E. Committee, suggestions or comments on these items will be provided by the liaison person.

D. The final syllabus and supplemental material is due no later than _____.

_____ _____
date Course Developer

_____
Chairman, C.E. Committee

Sign one copy and return to the C.E. Committee liaison within 10 days after receipt.

Medical Library Association, Inc.

APPENDIX E

TO BE COMPLETED AND RETURNED BY ALL C.E. REGISTRANTS

NOTE: Your C.E. registration will not be processed unless accompanied by this completed sheet.

NAME: _____

MAILING ADDRESS (for confirmation notice):

_____

_____

COURSES REGISTERED FOR:

	1st choice	2nd choice
Saturday	_____	_____
Sunday	_____	_____

Soc. Sec. #: _____

(necessary for CEU records)

HIGHEST ACADEMIC QUALIFICATION:

	Major
High school	_____
College (# years)	_____
Bachelor's degree	_____
Master's degree	_____
Post-master's	_____

PLACE OF EMPLOYMENT:

Hospital _____
University _____
Research Center _____
Other (please specify) _____
_____

WHAT DO YOU HOPE TO GAIN BY TAKING THESE COURSES? (Please answer separately for each course, on reverse side)

Complete only if registering for CE 19

HAVE YOU TAKEN CE 18 (SYSTEMS ANALYSIS)? _____

If no, briefly describe how you attained equivalent background:

IF YOU ARE REGISTERING FOR THE SECOND DAY OF CE 19 ONLY, briefly describe how you attained the knowledge to be presented on first day:

Complete only if registering for CE 26

PLEASE CHECK ALL ITEMS BELOW WHICH APPLY:

_____ Ph.D. Candidate
_____ Planning to teach in library school
_____ Presently teach in library school
_____ Teach or have taught in MLA Continuing Education program
_____ Planning to teach in MLA CE pgm.
_____ Responsible for staff development or CE programs
_____ Extension librarian with experience in presenting workshops

Complete only if registering for CE 30

DESCRIBE YOUR PRESENT RESPONSIBILITIES WITH REGARD TO AUDIOVISUALS:

Medical Library Association, Inc. Suite 3208, 919 North Michigan Avenue, Chicago, Illinois 60611 312/266-2456

APPENDIX F

INSTRUCTOR FORM LETTER

July 16, 1975

Neil Barnhard
14 Pinnacle Drive
Little Rock, AR 72205

Dear Neil:

Welcome to MLA's continuing education program and thank you for agreeing to teach CE 5, Human Factors in Library Administration, at the TALON/SRG meeting in Shreveport, LA on October 7, 1975. Your local contact will be Marilyn Miller. Her address is:

Marilyn Miller
Reference Librarian
LSU Medical Center
P.O. Box 3932
Shreveport, LA 71130

Would you let the local contact know how you would like the room set up for your course and what equipment and/or reference tools you need to teach it? You may wish to use the attached form for this purpose. Courses run from 9 am to 5 pm, with an hour for lunch. Most groups break for coffee in the morning and afternoon and your local contact can give you the specifics on scheduling.

While you are responsible for making your own accommodations, etc., you may wish to ask Marilyn for information about the nearest place to stay and how to get there from the airport.

We will reimburse your expenses (coach airfare, ground travel, accommodations, meals, etc.) and pay you an honoaraium of $50. Please send receipts and the ORIGINAL airline ticket if applicable. MLA will cover your actual room expenses, and up to $12/day for meals. Automobile travel is reimbursed at the rate of 15¢/mile.

Under separate cover I am sending you a packet of materials you may find helpful in preparing for and teaching the course. Also included is a copy of the syllabus for the course, and suggestions for instructors and handouts which we have on file. Each participant will receive a copy of the syllabus at the beginning of class; if you wish them to receive the syllabi in advance, Marilyn can arrange this but be sure to give her enough notice and remember the mail is not always as fast or direct as we would like.

Marilyn may ask you to distribute the course evaluations and certificates of attendance at the end of class. We find that we get a much higher response rate on the evaluations if we wait and hand out the certificates in exchange for a completed evaluation. But that is up to you!

Again, let me thank you for helping us in our continuing education program. If there is any further information you need, or anything else we can help you with, please do not hesitate to contact me or my assistant, Julie Blume, at MLA Headquarters.

Sincerely,

Julie A. Virgo
Director of Education

cc: Local contact
CE Committee Chairman

APPENDIX G

MEDICAL LIBRARY ASSOCIATION

Continuing Education Program

Name of Instructor _____

Title of Course _____

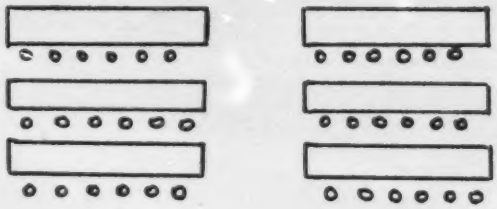
Date(s) Offered _____

Course Location _____

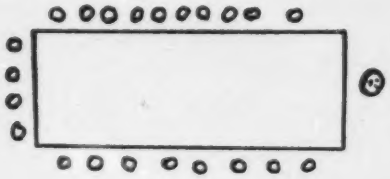
Please check the following items that are required to teach the above course.

TYPE OF ROOM SET-UP

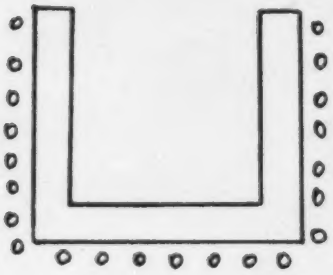
( ) Classroom



( ) Conference



( ) Hollow - U



( ) Theatre style

( ) Other -- Please specify and diagram

TEACHING EQUIPMENT

( ) Instructor's table

( ) Podium

( ) Large blackboard

( ) Chalk

( ) Eraser

( ) Screen

( ) Flip chart

( ) Felt tip pens

( ) Masking tape

( ) Lantern slide projector (3¼" x 4")

( ) Carousel slide projector

( ) Overhead transparency projector

( ) 16 mm motion picture projector

( ) Table for reference tools or equipment

( ) Other -- Please specify
This includes all CE 16 equipment

TEACHING MATERIALS

( ) Reference tools
Please attach a separate sheet listing titles and number of copies

( ) Terminals (please specify models)

( ) Telephones

SHOULD YOU NEED ADDITITONAL EQUIPMENT, OR OTHER ITEMS NOT LISTED HERE, PLEASE SPECIFY.

APPENDIX H

INFORMATION ON

LOCAL PRESENTATION OF CONTINUING EDUCATION COURSES

1975/76

The attached list of one-half to two-day continuing education courses, developed by the Medical Library Association, are available for local presentation under the sponsorship of MLA regional groups, library schools, university extension divisions, and/or interested professional groups. This information is accurate for the 1975/76 Association year (June, 1975 - June, 1976). After this period, check with the Division of Education for more recent course information.

COURSES:

The sponsoring group may choose any of the courses for local presentation.

Each course requires one day (9 am - 5 pm) for presentation unless otherwise specified. The number of courses offered is determined by the sponsoring organization and more than one course can be offered on the same day or several can be grouped together in sequential fashion over a period of two or more days.

Courses can be arranged for any date or dates that are convenient for the sponsoring group. However, the Medical Library Association's Division of Education asks that it be notified a minimum of six weeks before a course is planned so that appropriate arrangements may be made for the presentation.

NUMBER OF REGISTRANTS:

Continuing education courses are designed for maximum interaction between student and instructor and are usually most successful when classes are small. Fifteen to twenty individuals per section is preferable although some courses can accommodate as many as twenty-five persons. A minimum of twelve persons per course per section must register in order to cover costs of presentation.

REGISTRATION:

The sponsoring group handles all course registrations directly. Checks should be made payable to the sponsoring group; at the conclusion of the course, a single check covering all registration fees should be sent via registered

mail to the Medical Library Association in Chicago. MLA also needs social security numbers for each registrant in order to keep our continuing education records accurate. The sponsoring group is responsible for collecting this information on all participants, including non-MLA members.

INSTRUCTORS:

Selection of instructors is made by the Division of Education of the Medical Library Association. MLA pays all instructor expenses.

COSTS:

A fee of $45 per person per day is charged. However, individual members of the Medical Library Association, and those persons designated in the MLA Directory as institutional members' representatives pay $30. Members of a regional group of MLA but not members of MLA itself are not eligible for the $30 registration fee. Two-day courses cost $60 for members, $90 for others. The half-day course, CE 11, costs $15 for members, $25 for non-members.

Arrangement costs not specifically agreed upon by the Division of Education are paid by the sponsoring group.

Costs of assembling and shipping course materials are assumed by the Association.

If the sponsoring group wishes to include food or coffee breaks it is responsible for the cost.

Costs of publicity or promotional mailings to the group's members are borne by the sponsoring organization.

ARRANGEMENTS:

The Division of Education provides information regarding the number of rooms required, audiovisual equipment needed, and so forth. It also provides lists of necessary items for the bibliography courses; however, the sponsoring organization furnishes the actual materials. The Division of Education lends advisory assistance if desired.

COURSE PACKAGE:

The Division of Education provides:

1) Copies of the syllabus for the course.
2) Any printed materials (manuals, handouts) needed for presentation of the course.
3) An instructor for the course.
4) Certificates of Attendance and evaluation forms.

The Division of Education will work closely with the sponsoring group to insure that their continuing education activities are presented in a manner consistent with the high standards of the Medical Library Association.

WHO TO CONTACT:

Requests for continuing education courses for the 1975/76 calendar year should be made to:

Division of Education
Medical Library Association
919 North Michigan Avenue
Suite 3208
Chicago, IL 60611

Telephone: 312/266-2456

Medical Library Association, Inc. Suite 3208, 919 North Michigan Avenue, Chicago, Illinois 60611 312/266-2456

APPENDIX I

LETTER TO LOCAL CONTACT

July 16, 1975

Faye Meyn
Sacred Heart General Hospital
1200 Alder Street
Eugene, OR 97401

Dear Faye:

This letter is to confirm the arrangements for the sponsoring of one continuing education course by the Pacific Northwest Regional Group in Eugene, OR on September 30, 1975. The course you are sponsoring is CE 16, Management of Media in Libraries. The instructor for CE 16 will be Mike Homan. His address is:

Michael Homan
PSRMLS
UCLA-Biomedical Library
Center for the Health Sciences
Los Angeles, CA 90024
213/825-5341

You should work with the instructor directly to find out what his requirements are in terms of classroom set-up, blackboards, AV equipment, bibliographic tools, etc. Would you also assist him with information about accommodations, how to get to the place at which the course is being taught from the airport, etc., although those matters and payment thereof are the instructor's responsibility.

Mike may need a number of AV equipment items for CE 16. I hope you can borrow all the necessary pieces, but it is possible that you will need to rent some items. MLA does not cover rental charges. Your group may either absorb the costs from its own budget or charge participants in that course a "lab fee" to cover the additional expense.

Syllabi for registrants will be shipped directly to you, one month in advance of presentation. Would you notify us of their arrival or nonarrival? Unused syllabi must be returned to MLA's Division of Education so that the number of registrants plus the number of returned syllabi

should equal the number of syllabi sent to you. Mike may wish to have the syllabi sent to students in advance, and he will notify you if this is so.

We will also send you certificates of attendance and evaluation forms. Please type the course number and name, date of presentation, and participant's name on the certificate and give them to each student at the conclusion of the course. We find that we get a high rate of completed evaluation forms if you hand out the certificate in exchange for an evaluation!

As you know, we now award continuing education units (CEUs) for participation in MLA courses. Therefore, in order to keep our records up to date, for each course we must receive from you a list of registrants with their address and social security number. Also, at the conclusion of the course, please mail a check for the total course registration to the Division of Education at MLA Headquarters by registered mail. Please note that there are two registration fees: $45 registration, but $30 for MLA members. Those persons eligible for the $30 fee are individual members of MLA and those individuals designated as institutional representatives in the MLA Directory. Persons who are members of a regional group of MLA but not members of MLA itself are not eligible for the reduced registration fee and are expected to pay the full $45.

Courses will be presented if there is a minimum of 12 registrants. If you do not get 12 registrants for the course, you may still choose to sponsor the course by supplementing the registration fees with an amount from your group's own funds.

If there is any further information you need, or anything we can help you with, please do not hesitate to contact me, or my assistant, Julie Blume, at MLA Headquarters.

Sincerely,

Julie A. Virgo
Director of Education

cc: CE Committee Chairman

Medical Library Association, Inc. Suite 3208, 919 North Michigan Avenue, Chicago, Illinois 60611
312/266-2456

APPENDIX J

CONTINUING EDUCATION COMMITTEE

Course Evaluation - Participants' Questionnaire

By completing this form thoughtfully you will help to make future courses more valuable for yourself and others, and you will assist the Committee in reaching an objective evaluation of its continuing education program. Please complete this form and give it to the instructor before leaving

Instructor's Name _____

Course Title _____

Course Number _____ Date _____

Sponsoring Group _____

1. How did the instructor present the course:
   Very well ( )
   Well ( )
   Average ( )
   Poorly ( )
   Comments and/or suggestions:

2. Please comment on the effectiveness/level/quality/etc. of the syllabus and other materials used in the course:

3. How well did the course meet its objectives as stated in the syllabus?
   Completely ( )
   Somewhat ( ) - Please answer 3a
   Poorly ( ) -- Please answer 3a

   3a. Why? Your misunderstanding of course objectives ( )
   Inaccuracy of course objectives ( )
   Course content ( )
   Other:

4. How well did the course meet your own objectives and expectations in taking it?
   Completely ( )
   Somewhat ( ) - Please answer 4a
   Poorly ( ) -- Please answer 4a

   4a. Why? Your misunderstanding of course description ( )
   Inaccuracy of course description ( )
   Course content ( )
   Other:

5. How could the course have been more useful to you?

6. What alterations, if any, do you feel need to be made in the course content or presentation?

7. Please list the names and addresses of individuals you feel would be qualified to teach this course:

8. Please suggest subjects for future MIA continuing education courses:

THANK YOU!

CHAPTER IX

SUMMARY AND CONCLUSIONS

The purpose of the present study, as stated in the original project proposal, was "to assess and identify the needs for continuing education for medical librarianship and to design, implement, and evaluate some components of a program which will be responsive to these needs."

Continuing education needs were assessed using several different approaches. A questionnaire survey was carried out within the regional groups of the Medical Library Association (regional members do not necessarily belong to MLA) and a random sample survey of MLA members was also made. A less traditional approach to assessing continuing education needs of a profession was taken in an attempt to provide objective data which would support the perceived subjective needs of health sciences library staffs. The contents of the published journal literature at the time the study was undertaken were compared with the literature five and ten years previously to document changes in the field. The results of continuing education needs studies conducted by other library groups and organizations were analyzed and compared with the results obtained in the present study.

Despite differences in types of library staffs surveyed (all types of librarians, information scientists, special librarians)

the needs identified were very similar:

Administration

Audiovisuals

Reference tools and services
(including on-line systems)

Budgeting

The present study analyzed these needs by types of health sciences library staffs but found that the perceived needs were the same, although the settings might require different approaches to the materials.

One of the most significant findings from this phase of the study was the fact that library staffs had such difficulty in articulating what specific continuing education needs they had, and at what level. This pointed to the need for the development of task analysis data from which assessment tests could be developed.

At the same time that an inventory of needs was being developed, data from a one year time period were collected on continuing education opportunities that were already available. More than 1,000 organizations who might be offering continuing education activities relevant to health sciences library staffs, were solicited for information about their programs. Information about the location, subject matter, cost, length, target population, and type of sponsoring organization was analyzed for 264 courses sponsored by 205 organizations. While the activities analyzed do not represent all opportunities during that time period they do reflect some patterns

in the supply of group learning opportunities.

Programs were available in all eleven regional medical library areas although the number of opportunities varied considerably by region from one in Region 10 to 51 in Region 2. When the analysis of courses offered was compared with the needs expressed the offerings appeared very sparse. The management of audio-visuals was covered to some extent in 9 out of 11 regions; reference, the most frequently offered, was not offered in 4 out of 11 regions, and all other highly ranked topics were hardly available anywhere.

It would appear that any programs aimed at the highest ranking topics would be well-received.

A study was made of the organizational constraints and supports given to library staffs for their continuing education activities. The results showed that continuing education is primarily a self-directed activity. The most significant response from this phase of the study was the number of respondents who indicated that their most immediate superior "accepts my decision with regard to my continuing education needs." This response was checked more frequently than any other question regarding support on the questionnaire. It points to the motivation of the individual as an important factor in continuing education.

Another significant finding was that employers are more supportive of employees attending professional meetings than independent continuing education courses. This supports our view that for some people, who are able to get release time and/or expenses paid for professional meetings, conducting continuing education courses in conjunction with professional meetings is

important. Two-thirds of the respondents had no in-service training, that they were aware of, available to them in their employing institutions. These people must look to outside organizations and their professional associations to provide continuing education.

The most meaningful professional learning experience had by the largest number of respondents was an on-the-job challenge. The category was checked by twice as many people as the next highest ranked category. This finding again points to the needs of the individual and to his/her responsibility to respond to the need at an individually motivated level. It also supports the need for information about what continuing education opportunities were available so that the individual can tap into them. The Clearinghouse on Continuing Education Opportunities, begun during this project and continuing, will serve this purpose.

In order to learn more about continuing education programming both in librarianship and in other professions, library organizations and organizations in professions known to be active in continuing education programming were surveyed.

A surprising finding was that some of the national library associations seem consistently less interested in supporting or sponsoring continuing education program than any of the other groups surveyed. For example, 3 of the 11 national library associations felt no responsibility for providing continuing education programs for any levels of their membership. National library associations ranked highest of all groups in their perceived "lack of membership interest" as a reason for not providing continuing education, and they ranked

lowest in the percentage of associations planning to offer continuing education programming in the next two years although they were the group with the second greatest potential for growth.

At this point in the study attention was turned to developing a model continuing education program for health sciences library staffs, based on the information gathered in the project. Some options were considered, but discarded as not being economically feasible or not appropriate to the environments in which the target library staffs function, e.g. educational television, telephone lecture networks.

The model developed addresses eight areas:

.. Optimal allocation of available resources.

.. The target audience.

.. Needs assessment.

.. Formats for delivering continuing education.

.. Methods for developing programs.

.. Identifying, training, and evaluating instructors.

.. The mechanics of conducting programs.

.. Quality control.

While the first and last mentioned are rather pervading features intended to permeate the total model, they are spelled out as separate entities to stress their importance in the model.

Under each component different possibilities are considered. The final section of the report compares the Medical Library Association's continuing education program as it was when the project period began and when it ended, within the framework of the model.

During the project period the program grew in depth, variety, and in the number of people reached. Continuing education was no longer viewed as a series of one-day courses, but more as a frame of mind. Topics that were identified as indicative of subject content needs are not always best met by formal courses. Through newsletter articles and talks given by project staff the attitude of continuing education being a shared responsibility, but mostly the responsibility of the individual, was stressed. One important role of the Association is to enable the individual to perceive, identify, and tap into all the available resources, whether they be produced by the Medical Library Association or others.

Various sub-components of the model were tried and tested. We learned that we should build on the existing one-day programs, targeting them at specific audiences, further improving their quality, and providing them more often at annual and local meetings. We found that intensive residential institutes, while accomplishing their education objectives, tended not to be cost/effective unless co-sponsored by a similar organization which could bring in a larger number of potential participants than MLA's membership alone provided.

As a result of the project many activities occurred which would either have taken much longer to happen without the project support, or might never have happened at all.

Continuing education activities in a variety of formats have been developed. The existing one-day continuing education courses proved to be an important part of the total program and were significantly strengthened. The number of new courses developed

in areas ranked most highly in the needs assessment, almost tripled as did the number of registrants and locations where they were offered. This growth has continued to occur since the conclusion of the project period. In a recent analysis by CLENE (Continuing Library Education Network and Exchange) the Medical Library Association proved to be the largest single producer of continuing education activities in librarianship.

There is still a tremendous potential for further growth and improvement. Demographic data in easily manipulated formats are still not available, although this capability is expected within the next six months. Continuing education programming is still almost non-existent for the untrained and technician levels. Little, within MLA, is available for the administrator of the large medical library although he/she can tap into the Continuing Education Opportunities Clearinghouse which continues to be published monthly as a part of the MLA News. Home study courses and self-assessment programming is only just beginning. There is insufficient staff available to provide the types of individual and organizational consulting services for continuing education and staff development that would be desirable. These are areas that will be addressed in the future.

Some of the indirect benefits of the project include the focus which it placed on continuing education within the Association and the profession. A full time staff member (Assistant Director of Education) whose major responsibility is continuing education

programming has been added to the MIA Division of Education. Project staff were provided the opportunity of working with an educational consultant who brought to bear her experiences both as an educator and from continuing education programming with other organizations. Finally, the project provided data which reinforced some things we felt we already knew intuitively, but can now proceed forward with confidence, knowing that these intuitions have been substantiated in more objective ways.